

SUMMER 2004

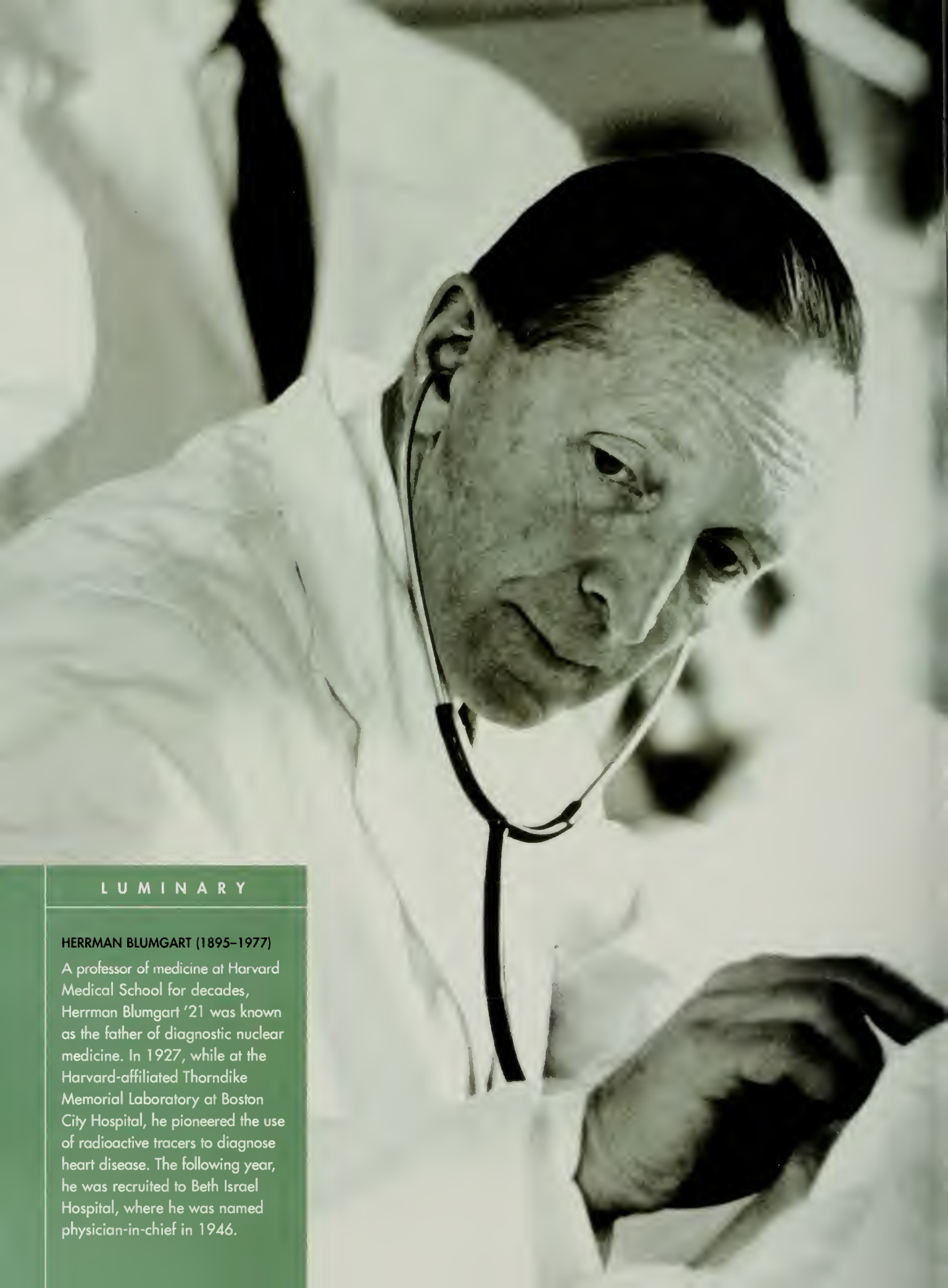
Harvard Medical

ALUMNI BULLETIN



[Can Humpty Dumpty Be Put Back Together?]

The Health Care Financing Crisis Has Physicians Scrambling for Answers



LUMINARY

HERRMAN BLUMGART (1895–1977)

A professor of medicine at Harvard Medical School for decades, Herrman Blumgart '21 was known as the father of diagnostic nuclear medicine. In 1927, while at the Harvard-affiliated Thorndike Memorial Laboratory at Boston City Hospital, he pioneered the use of radioactive tracers to diagnose heart disease. The following year, he was recruited to Beth Israel Hospital, where he was named physician-in-chief in 1946.

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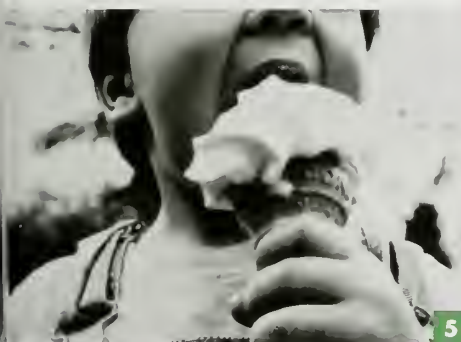
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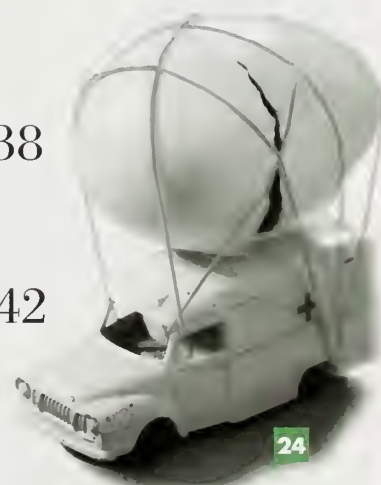
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Cover photograph by Stephen Webster

In This Issue

P OULTRY METAPHORS COME TO MIND AS WE SEND THIS ISSUE OF THE *Bulletin* to press. Our cover article by Mitchell Rabkin '55 describes a surgical technique for repairing the increasingly broken Humpty Dumpty of health care financing. Yet, as we have covered this topic in the *Bulletin* for many years, always with the same dire warnings, it is difficult not to feel like Chicken Little. For a long time we've joined many other small voices in pointing out that the sky is not intact, but the barnyard we inhabit seems to be populated by generally placid creatures with only faintly uneasy expressions on their faces. Indeed, as Steffie Woolhandler observes in this issue, large chunks of the sky have already fallen around us, yet no real action has been taken to address this fact.

It is hard for me to understand why the national reaction is so tepid. As I write this, the media are reporting that another 1.4 million Americans have lost health insurance, bringing the total number without coverage to about one-sixth of the population. These folks know the impact of a sky in shards. But, in the nature of things, nothing has landed all that close to the farmer's house. Perhaps that's the reason for complacency. I haven't lost my health insurance, nor has any member of Congress or any state legislator. I'm sure judges are protected, and I can't imagine there's an insurance executive in the country who is at risk of post-celestial stress disorder.

Terminology itself must be part the problem. Health care financing? As long as we go on talking about "health care financing," my guess is that there will be no groundswell for change, because the phrase itself implies: "leave it to the experts." But how do you phrase the problem in a way that doesn't sound idealistic, socialistic, or politically naive? In an era when "torture" is being defined down, "disability," "early death," "bankruptcy," and "despair" must be losing their punch.

The only place any real change can originate is at the national level.

Someone, somewhere in the upper reaches of government, would have to make an active decision to bring about serious change. This seems to have been possible in essentially every other industrialized country, where some form of universal coverage exists. But bodies at rest tend to remain at rest, as Newton taught us. Or, to put it less kindly, there's a great need for the well-heeled and well-insured leaders of our country to be a little less chicken.

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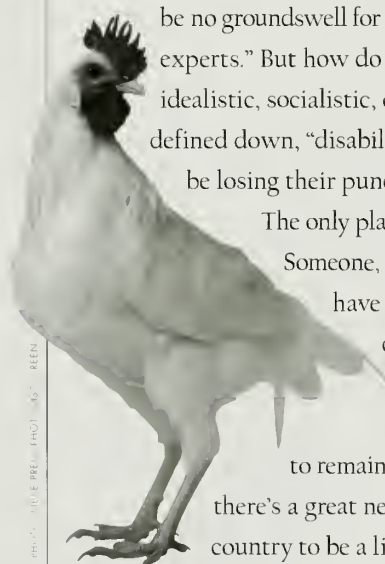


PHOTO: JULE PEELE PHOTOGRAPHY



The Write Stuff

I cannot recall when I last so enjoyed an issue of the *Bulletin*, cover to cover. The Autumn 2003 issue, with its special report on the neurobiology of the arts, arrived at a time when I had started to draft a personal essay. The writing was an enormous struggle, similar to a patient having to relearn how to walk. I was depressed. I believed that my writing biceps had atrophied from neglect.

So it was with tremendous interest that I read the interview with Alice

Flaherty '94, in which she talked about hypergraphia and its opposite, writer's block. I felt I was sitting at the table, drinking in an incredibly intimate and informative conversation. When she said that she believed that years of writing medicalese can cause the cortical atrophy of the creative writing center, I felt empowered to persist.

I am not hypergraphic. But, like a pianist, I am practicing, practicing, practicing. Thank you for this.

EARNEST WU '76
CHELMSFORD, MASSACHUSETTS

Fall Flattery

I just received the Autumn 2003 issue of the *Bulletin*. It is great—a major triumph! Congratulations.

MITCHELL T. RABKIN '55
MILTON, MASSACHUSETTS

Beauty and the Beast

My husband and I are fighting over the issue on the neurobiology of the arts (we're both HMSers). The beast won today and ran off with it to work!

BETTY ANNE JOHNSON '79
RICHMOND, VIRGINIA

Many Happy Returns

Even though Harvard Medical School does not formally organize reunions beyond the 60th, the Class of 1939 held its unofficial 65th class reunion on Alumni Day of this year. Of the original 125 members, there are 28 survivors and of that group we had seven present. Our reunion included a visit to Arthur and Anna Pier in their home.

Most of our group has reached the age of 90 and yet we were able to have an enjoyable time, particularly during the Quadrangle meeting with Deans Joseph Martin and Daniel Federman '53. We ate dinner at John Stanbury's house, where we had not only our reunion members, but also about eight other guests, including some spouses and children.

At any rate, the Class of 1939 is still alive and kicking, and we want to send greetings to every one of our friends in Boston.

EBEN ALEXANDER, JR. '39
WINSTON SALEM, NORTH CAROLINA

The Bulletin welcomes letters to the editor. Please send letters by mail (Harvard Medical Alumni Bulletin, 25 Shattuck Street, Boston, Massachusetts 02115); fax (617-384 8901); or email (bulletin@hms.harvard.edu). Letters may be edited for length or clarity.

There's No Business Like Co-Business



HARVARD MEDICAL SCHOOL AND HARVARD Business School (HBS) will launch a five-year joint MD-MBA program in September 2005.

Although several U.S. medical schools offer joint medical and management degrees, the five-year HMS-HBS program will stand apart in fostering intellectual integration of medicine and management. Students will spend the first three years at HMS, the fourth year at HBS, and the fifth year divided between HBS and HMS. Yet the management perspective will be introduced as a prematriculation online module that becomes increasingly pervasive during the first three years at HMS, culminating in a fully integrated fifth year.

About a dozen students over the past two decades have obtained separate degrees from HMS and HBS. A major difference between the pioneering days and the new program is that students will be accepted concurrently to the

MD-MBA program. Matriculation will be challenging in that applicants must be accepted by each school independently. Once the program starts in the fall of 2005, though, previously enrolled students in both schools may take the course offerings, and some of those students may subsequently decide to apply to the joint program.

Malcolm Cox '70, HMS dean for medical education, says coursework toward the new joint degree will enable students to reach beyond traditional boundaries. "The program," he says, "will provide the opportunity for all medical students, not just those enrolled in the new program, to better appreciate the critical importance of strong management skills in improving the U.S. health care delivery system." ■

They Oughtta Be in Pixels

IN 1913 SEVERAL EARNEST, BOW-TIED

young men at Harvard Medical School posed for a group photo. Clustered together in the Pathology Department, they stood stiffly in their white coats, a skeleton perched forlornly on a table behind them.

Web users now have online access to this and other archival images of HMS. These historical photos, a critical part of the School's institutional memory, document the development of medical education, clinical practice, and the Longwood Medical Area. Eventually, more than 4,000 images will be described in Web-based subject guides, which will include scans of 1,600 representative images. Click on www.countway.harvard.edu/archives/LDI_historical_images_guides.shtml to view the initial guides. ■



Rebuilding Blocks

HARVARD MEDICAL SCHOOL HAS rolled out a new, integrated clerkship at Cambridge Hospital. Innovative in its interdisciplinary, comprehensive approach, the clerkship will replace traditional block rotations with a yearlong immersion in the illnesses, treatments, and lives of 40 to 50 patients, beginning with their initial symptoms.

Participants in the clerkship will consist of an initial group of eight third-year students, including Dante Foster '06. Foster is looking forward to the unique learning experiences that will come from finding herself connected with individual patients rather than a particular service. "In helping patients from the onset of symptoms all the way through the journey of diagnosis, treatment, and follow-up," she says, "I will witness the entire process with those patients as my teachers."

The program was developed by David Hirsh, HMS instructor in medicine, and Barbara Ogur, HMS assistant professor of medicine, who built on the educational foundations laid by HMS professors Ronald Arky, William Silen, and others. The clerkship, funded by the Academy at HMS and a grant from the New York Academy of Medicine, is one of the first pilot projects in the ongoing Medical Education Reform Initiative, led by Malcolm Cox '70, the HMS dean for medical education. It exemplifies a new model for clinical education in which students have both longitudinal and immersion experiences in patient care.

Managed care and increasingly less-invasive technology have combined to attenuate admissions and hasten discharge, Ogur says. As a result, third-year students see illnesses as disparate snapshots rather than as movies with a beginning, a middle, and an end. These changes have diminished the students' contact with the patients.

In the new clerkship, students will follow about fifteen patients from inter-



Downsizing Junior

THE PROPORTION OF OBESE AND OVERWEIGHT CHILDREN AND ADOLESCENTS

has risen significantly around the world in the past 25 years. During this period, the rate of overweight and obesity among Americans has increased two- to three-fold. The rate among African American and Hispanic young people currently stands at 40 to 45 percent; among non-Hispanic whites, it is 25 to 30 percent.

Children's Hospital in Boston is working to combat these alarming trends through Optimal Weight for Life (OWL), the largest pediatric obesity program in New England. At the OWL multidisciplinary care clinic, physicians, nurse practitioners, dietitians, and psychologists provide care, develop treatments, and promote prevention efforts for more than 500 new patients each year.

According to David Ludwig, director of the OWL program and an HMS associate professor of pediatrics at Children's, overweight and obesity are influenced by genetics, diet, physical activity, and psychological factors. OWL combines comprehensive medical examinations, nutritional counseling, physical activities training, behavior modification, and group therapy to effect lifestyle changes.

"Fundamental changes in the social environment will be needed to address what is essentially becoming a public health crisis," Ludwig says. "Solutions to negative environmental conditions exist, but will require measures to change problems in food quality, policy, and advertising and also increased funding for public programs for school children, like physical education." ■

Jamae Kawauchi is assistant director of the Center of Excellence in Minority Health and Health Disparities at HMS.

Visit www.childrenshospital.org/owl to learn more about Optimal Weight for Life (OWL).

nal medicine, ten from pediatrics, and five to ten from psychiatry, neurology, and other areas. The students will also see numerous patients outside of their longitudinal cohorts. The patient-centered clerkship is designed to allow students to gain skills that will be transferable to any specialty, Ogur says.

"By giving the students the capacity to think deeply and by integrating the various sciences into their thinking, we will

enhance their curiosity," Ogur adds. "By also creating strong connections with patients over time, we hope to reinvigorate that core aspect of medicine, which is to put doctors' curiosity and skills in service to their patients."

Foster is eager for the experience. "The clerkship," she says, "should help me to get to know the patients who allow me to participate in their care not just as clinical puzzles but as whole human beings." ■



Golden Retrievers

THE BULLETIN RECENTLY WON THE ROBERT SIBLEY MAGAZINE OF THE YEAR award from the Council for Advancement and Support of Education (CASE), based on two issues whose special reports focused on money and medicine and the neurobiology of the arts. Each year this national grand gold award is sponsored and judged by the editors of *Newsweek*. The first graduate school magazine to win the Sibley Award since 1994, the *Bulletin* was automatically entered into competition for the award based on its recent gold medal in the professional and graduate school magazine category. The *Bulletin* also won a silver medal from CASE in the periodical special issues category for its special report on the neurobiology of the arts. ■

Bridging the Gulf

AT A CEREMONY THIS SPRING, ROBERT CRONE, DEAN FOR INTERNATIONAL programs at HMS and president and chief executive officer of Harvard Medical International, joined Saeed Al Muntafiq, chief executive officer of Dubai Healthcare City, and George Thibault '69, director of the Academy at HMS, in breaking ground on the Harvard Medical School Dubai Center, scheduled for completion in 2005.

Harvard Medical International and Dubai Healthcare City have already established a joint postgraduate training program to develop a cadre of physician-specialists who will contribute to the advancement of medicine and health in Dubai, the United Arab Emirates, and the entire Gulf Region.

It is hoped that research funded through the new center will help to drive a resurgence in scientific and medical excellence in the Arab world—a centuries-old tradition that has faded in recent years. In addition, an endowment created through the Harvard Medical School Foundation for Dubai will seek to make Dubai Healthcare City's services available to as broad a population as possible.

"Dubai Healthcare City has generated interest among health care professionals both within and outside of the Gulf Region," says Joseph Martin, dean of Harvard Medical School, "simply by building their mission around the real needs of the people in the region." ■

Good Hospital Fare

HARVARD-AFFILIATED HOSPITALS HAVE AGAIN placed high in *U.S. News and World Report's* annual rankings of the nation's more than 6,000 medical centers. Cited in the 2004 report as two of only 14 "honor roll" centers—hospitals that excelled in at least six specialties—were Massachusetts General Hospital (ranked third) and Brigham and Women's Hospital (ranked 12th).

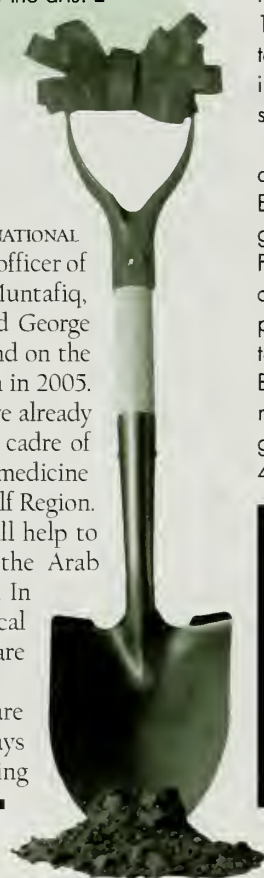
Harvard hospitals also received recognition for their outstanding work in 17 specialties. Massachusetts General Hospital ranked first in psychiatry; second in hormonal disorders; third in neurology and neurosurgery and orthopedics; fourth in digestive disorders, gynecology, kidney disease, and respiratory disorders; fifth in geriatrics and heart and heart surgery; seventh in rheumatology; eighth in urology; 12th in cancer; and 17th in pediatrics.

Brigham and Women's Hospital ranked first in kidney disease; third in gynecology; sixth in heart and heart surgery; eighth in hormonal disorders and rheumatology; 11th in digestive disorders; 16th in respiratory disorders; 18th in orthopedics; 23rd in geriatrics; 24th in neurology and neurosurgery; and 25th in urology.

Children's Hospital Boston ranked second in pediatrics. Massachusetts Eye and Ear Infirmary ranked third in otolaryngology and fourth in ophthalmology. Dana-Farber Cancer Institute ranked fourth in cancer. McLean Hospital ranked fourth in psychiatry. Spaulding Rehabilitation Hospital ranked eighth in rehabilitation. And Beth Israel Deaconess Medical Center ranked 12th in hormonal disorders, 18th in geriatrics, 26th in digestive disorders, and 40th in neurology and neurosurgery. ■

Nominations Sought

TO THE DISMAY OF GENERATIONS OF HMS alumni, Daniel Federman '53 will be stepping down as director of alumni relations next June. To nominate yourself or another HMS graduate to take on this role, email Joseph Hurd '64, incoming president of the Alumni Council, at joseph.k.hurd@lahey.org. ■





The Changing Mosaic of Harvard Medical School

IT HAS BEEN AN HONOR TO SERVE AS YOUR PRESIDENT this past year. In my farewell column, I wanted to offer just a few highlights from my term.

During the Alumni Council's fall meeting we learned about the efforts of Joan Reede, HMS dean for diversity and community partnership, to extend the rich intellectual resources of HMS into the community and to encourage young people in Boston to contemplate careers in medicine. We also applauded the efforts of HMS to diversify its student population in terms of ethnicity, socioeconomic status, and gender. Now focus must move, however, to those who will teach Harvard's changing mosaic. Only 3 percent of our medical school faculty members are persons of color. Of the 3,586 faculty members at the level of assistant professor and higher, there are only 9 professors, 31 associate professors, and 64 assistant professors of color. We must find ways to change this story.

and an initiative to develop ways to bring to bear the talent and intellect of the more than 8,000 alumni on the issues that affect us all. And at our June meeting, we narrowed a long list of issues to two areas in which we hope to engage alumni over the next two years: the plight of the uninsured and the preservation of professionalism in medicine.

The Council must now undertake the daunting task of trying to fill the shoes of Daniel Federman '53, our director of alumni relations. We all know that Dan is irreplaceable; he alone can recall anecdotes about—in addition to remembering the names of—many of the thousands of graduates in the past 50 years. He has announced his retirement beginning next summer, however, and the Council has begun to formulate a search committee. We have asked Dean Martin to strongly consider maintaining a separation in functions of the director of the alumni fund and the director of alumni relations, so we can continue to relate to alumni and advise the dean beyond issues related to fundraising.



We applauded the efforts of HMS to diversify its student population. Now focus must move, however, to the HMS faculty, only 3 percent of whom are persons of color.

To that end, on February 12, 2005, Dean Joseph Martin will announce the Alvin F. Poussaint, MD Visiting Lecture Fund to bring HMS graduates of color back to Boston. Such exposure should encourage more medical students to consider academic careers and ultimately choose HMS as their academic home. According to a survey conducted by Alane Shanks, associate dean for educational administration and finance, to which more than 300 graduates of color responded, the pool of candidates for this lectureship is rich. It includes a college president, a foundation CEO, a corporate executive, and Institute of Medicine scholars. The survey will soon be available on the HMS alumni website.

The fall meeting was followed by the opening ceremony of the New Research Building, which coincided with the 100th anniversary of the groundbreaking of the Quadrangle. A copy of the award-winning *Harvard Medical Alumni Bulletin* will mark the alumni presence at this celebration when the time capsule is opened in another 100 years.

In March, the Council sequestered itself for a day and a half to consider strategic issues. This retreat resulted in a constitutional amendment that will be presented to alumni next June, a commitment to increase awareness of student indebtedness,

In addition to Dan's departure, we are saddened that Nora Nercessian, associate dean for alumni programs and special projects, will be leaving us at the end of the year. Nora has been the resident historian of HMS and has worked extraordinary hours on our behalf. In her spare time, she has written five books. The most recent one, *Against All Odds*, details the incredible stories of the first graduates of color from HMS. It will be officially celebrated at a special event on October 7.

I would also like to recognize the contributions of our retiring Council members: Paula Johnson '85, Barbara McNeil '66, Laurence Ronan '87, and Mark Rosenberg '72. Moreover, a number of individuals who work tirelessly on behalf of the alumni deserve our gratitude as well: Tenley Albright '61, William Bennett '68, Anne Benware, Paula Byron, Jean Hurd, Patrick Rivera, and Kristen White.

My commitment to HMS has been deepened by this experience. Thanks again for the privilege, and I hope those of you who have not yet done so will become involved in the Council and reconnect to this outstanding medical school. ■

Eve J. Higginbotham '79 is chair of the Department of Ophthalmology at the University of Maryland School of Medicine.

Murder Is No Accident

Understanding and Preventing Youth Violence in America,
by Deborah Prothrow-Stith '79 and Howard R. Spivak
(John Wiley & Sons, 2003)

IT BEGAN IN JUNIOR HIGH SCHOOL—THE GIRLS IN THE BATHROOM, hiked up on the porcelain sinks, with high hair and cigarettes. There was threat the second the door closed behind you. Outside that door, the girls led distant lives on the other side of the city. Some dropped out of school. Some had babies. Few went to college. Inside the door, they smoked, looking indifferent, angry, amused. Sometimes they would ask for money. They were a city unto themselves, the girls in the bathroom. You used your own bathroom before you left home.

We knew there was violence in their world, but we never cared to know more. They might share our school building, but most of the time they lived too far away to worry about. They were Them. But since the 1999 shootings at Columbine, They have become Us. Teen violence has risen in the middle and upper classes.

Murder Is No Accident: Understanding and Preventing Youth Violence in America is written by two Boston physicians, Deborah Prothrow-Stith '79 and Howard R. Spivak. It is so earnest, so unabashed, and so without ulterior motive that it deserves earnest and unabashed attention. The authors offer no glad hands or innuendo, and they don't ask to see the baby pictures before bluntly making their demand. "We want you," they write, "to join...a movement."

Youth violence as epidemic has been clearly documented, first in poor communities, then in suburban schools; our homicide rate is the highest by far among the 26 wealthiest industrialized nations. Seventy-five percent of victims are between 15 and 34 years old, and 75 percent of murders are committed with guns. It was easy to relegate the problem to the criminal justice system, where responses are post-facto, punitive, and crisis-oriented. They are also expensively geared toward individual offenders. No one had conceived of violence as a medical issue, even though epidemics are public health terrain. Prothrow-Stith, a former Massachusetts commissioner of public health, first gathered data as an HMS student—but not in class. She learned her facts from a copy of *Ebony* magazine.

Murder Is No Accident argues definitively that youth violence is a public health problem, and a preventable one. It can be broken down by analysis into risk and protective factors.

The risk factors are obvious: poverty, alcohol, gun availability, romanticization in the media, and exposure in homes and communities overwhelmed with trauma.

Some of the protective strategies seem equally obvious, especially those extending beyond the reach of the justice system: maximizing cognitive development in children and adolescents, teaching conflict resolution, legislating against handguns, countering media violence with media literacy, decreasing household exposure to violence of all sorts. So why, the authors wonder, haven't these strategies been implemented?

Then the authors grow bolder. They suggest that, instead of expelling kids under a zero-tolerance policy, schools need to draw them closer with assessment and follow-up. Why not teach parenting skills in high school? Why not mount violence prevention media campaigns?

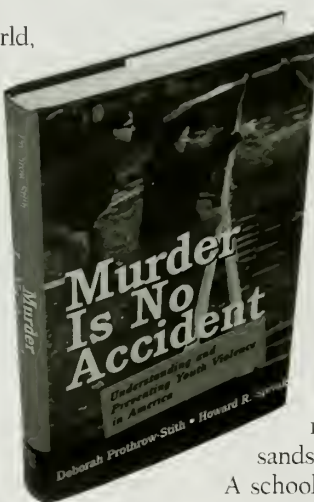
Why not turn school buildings into multiservice centers whose doors stay open after the academic day ends? Why not follow children admitted to hospitals with injuries back home after discharge, just as there is follow-up for children admitted with asthma? Why not bring the mountains to Mohammed?

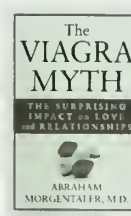
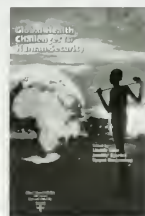
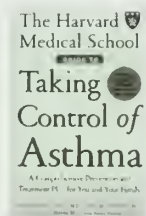
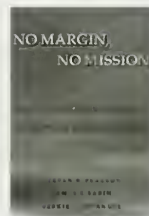
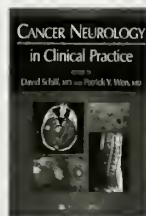
The movement the authors describe works community up instead of policy down. It is like building a war map with pushpins connecting nonadjacent regions, only this is a peace map. The authors call it a "deliberate Johnny Appleseed approach," and it has worked in Boston, where Prothrow-Stith and Spivak "trained somebody who trained somebody else who recruited and trained somebody else," until thousands of people were involved.

A school curriculum for high-risk youth widened into collaborations between community workers and teens, police and clergy, courts and mental health providers, tenant associations and youth groups, police and probation officers, hospitals and outreach workers. No sector was left out, and no sector was left alone to respond. It was the broadest spectrum of treatment possible, and the patient responded. In Boston, the rate of gun-related adolescent homicides dropped from almost one a month in 1989 to none at all in 1996. These are numbers with clout.

But the writers are—remarkably—unimpressed with themselves. They have no time for laurels. As the book closes, they warn that a third epidemic is upon us: 25 percent of adolescents arrested for violence are now females. The girls in the bathroom who haunted the past also haunt the future. And in Boston, the number of adolescent homicides has recently started to creep up. Just because violence can be stopped doesn't mean that it will. ■

Elissa Ely '88 is a lecturer on psychiatry at HMS.





How to Win the Nobel Prize

An Unexpected Life in Science, by J. Michael Bishop '61 (Harvard University Press, 2003)

In 1989 the author, a microbiologist, and Harold Varmus won the Nobel Prize for their discovery that normal genes can cause cancer under certain circumstances. Here Bishop tells readers how they made their discovery. In his lively narrative, punctuated with vivid anecdotes about some of our deadliest microbial enemies, he weaves together two strands of medical history.

Cancer Neurology in Clinical Practice

edited by David Schiff '88 and Patrick Y. Wen (Humana Press, 2003)

This book emphasizes common neurological complications of systemic cancer rather than focusing on brain tumors. It serves as an up-to-date reference for both neuro-oncologists and physicians who are not specialists. The authors describe neurological symptoms and complications of cancer and cancer therapy, as well as neuro-oncologic complications of organ-specific malignancies.

No Margin, No Mission

Health-Care Organizations and the Quest for Ethical Excellence, by Steven D. Pearson, James E. Sabin '64, and Ezekiel J. Emanuel '85 (Oxford University Press, 2003)

The result of a two-year national project, Best Ethical Strategies for Managed Care,

this book addresses the challenge of dispensing health care fairly in a competitive market. The authors take best practices from U.S. organizations already using them and create a template for excellence. Each chapter defines a problem and offers remedies based on case examples.

The Harvard Medical School Guide to Taking Control of Asthma

A Comprehensive Prevention and Treatment Plan for You and Your Family, by Christopher H. Fanta '75, Lynda M. Cristiano, and Kenan Haver, with Nancy Waring (Free Press, 2003)

This commonsense guide is designed to help the more than 15 million Americans who suffer from asthma lead fuller, more active lives. It outlines cutting-edge therapies as well as complementary and alternative medical treatments. The authors describe potential situations and offer suggestions for managing them. They also address special asthma concerns for children, women, and the elderly.

Dreaming

An Introduction to the Science of Sleep, by J. Allan Hobson '59 (Oxford University Press, 2003)

Hobson, a psychiatrist, replaces the dream mystique with sleep science for the layperson. He compares the neurobiology of the sleeping and dreaming brain with that of the waking brain. His bottom line: dreaming has no prophetic quality; it's a physio-

logical process that is necessary for survival. The neurobiology of brain activation, he says, is what determines the odd, associative nature of dream consciousness.

Global Health Challenges for Human Security

edited by Lincoln Chen '68, Jennifer Leaning, and Vasant Narasimhan '03 (Harvard University Press, 2003)

Harvard's Global Equity Initiative, founded by Chen, commissioned the contributions to this volume, which explores the evolving relationship between global health and human security. The book covers health epidemics caused by infectious diseases, violence, security risks, and poverty. Through case studies, the authors show that individual and collective action can improve global health and security.

The Viagra Myth

The Surprising Impact on Love and Relationships, by Abraham Morgentaler '82 (Jossey-Bass, 2003)

Morgentaler, founder of Men's Health Boston, uses case examples to illuminate what Viagra can alleviate (performance anxiety and erectile dysfunction) and what it can't (identity issues). The author pays special attention to the "dark side" of taking the drug—its potential to rob a man of feeling valued for who he really is—and examines alternatives to Viagra, especially for those who have had prostate cancer.



The Secrets of Brain Aging Revealed

A LONG WITH FAILING EYESIGHT and impaired hearing, for many people old age brings the frustration of diminishing mental abilities. For scientists who study aging and neurodegeneration, the Holy Grail has been to identify the molecular changes underlying this seemingly inevitable decline in brainpower.

Now, researchers at HMS and Children's Hospital Boston have identified a group of genes whose activity decreases with age in the human brain. The decline, starting as early as 40, results from damage to the brain's DNA and progresses at varying rates in different individuals.

"We found that genes that play a role in learning and memory were among those most significantly reduced in the aging human cortex," says Bruce Yankner, HMS professor of neurology at Children's and senior author of the study, published in the June 24 issue of *Nature*. "These include genes that are required for communication between neurons."

The results suggest that aging starts early in adult life, and they raise the possibility that protecting against DNA damage could delay aging and age-related neurodegenerative conditions such as Alzheimer's disease.

Yankner and his colleagues used gene chip technology to measure the expression levels of 11,000 genes, or nearly half the genome, in postmortem brain tissue from the frontal cortex of 30 normal subjects ranging in age from 26 to 106. They found that 4 percent of the genes changed in expression between the young and old brains. By comparing gene expression patterns between different subjects, the researchers found that gene activity was similar among all the young adults and was uniformly changed among the over-70 subjects. But the middle-aged group between 40 and 70 years old showed much more variability.

"Some of those individuals looked more like the young group, while the transcriptome patterns of others looked

more like the old group," Yankner says. "It's a case where science validates several thousand years of common sense by suggesting that people age at different rates."

The brain does not passively submit to the passage of years, however. The genome analysis identified increases in a group of protective genes that defend tissues against oxygen damage. The increase in antioxidant genes, DNA repair genes, and stress-response genes suggested to Yankner and his colleagues that the aging brain might be fighting increased oxidative stress. These observations also led the researchers to hypothesize that some of the genes that were less active in the aging brain might be disproportionately affected by oxidative DNA damage.

To look at DNA damage in brain tissue, Tao Lu, a research fellow in neurology in Yankner's lab, devised a method that first cleaved DNA specifically at sites of damage, then measured how much intact DNA was left in any particular gene by quantitative polymerase chain reaction. "Developing this assay really opened a door for us," Yankner says, "because it enabled us to resolve oxidative DNA damage to any sequence in the genome." The scientists used the assay to look at 30 different genes and saw damage in some genes after age 40 and in all genes after age 70.

The researchers found that damage was most common in the promoter regions of genes. This made sense, because promoters tend to be high in guanine and cytosine, bases that are most sensitive to oxidative damage. DNA damage that occurs in these regions is not repaired during normal gene activity, but gets reversed only when cells divide. Since neurons do not divide, promoter damage can accumulate and, the researchers reasoned, could lead to the depressed gene activity detected in aging brains.

That's exactly what seems to happen, the researchers found. They discovered that the genes that were downregulated

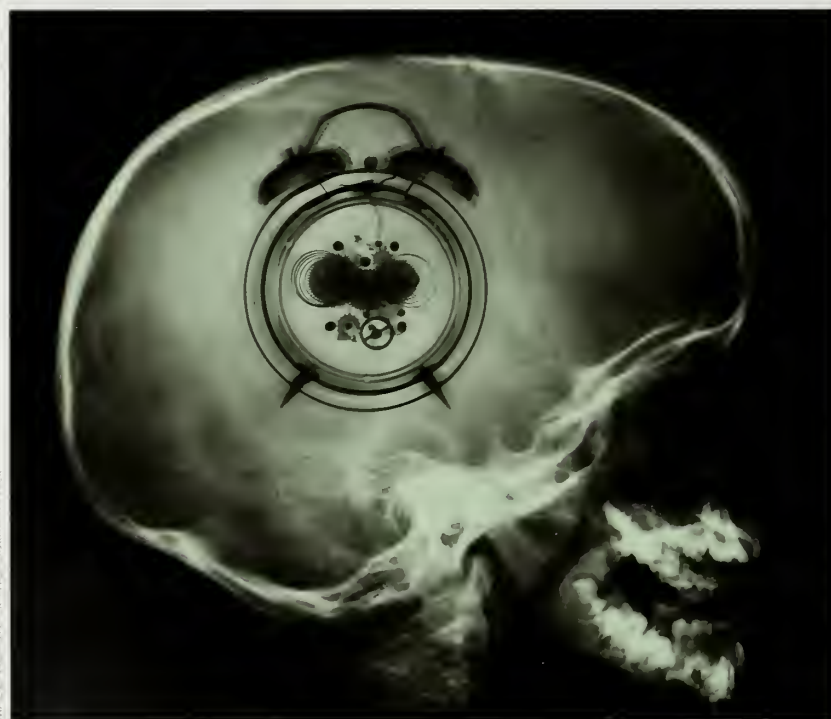


IMAGE COURTESY OF R. BAKER

Research Digest

▶ CARB APPEAL

with aging accumulated greater damage than genes whose expression was stable or increased. Using neuron cells in culture and even by damaging the DNA in a test tube, the researchers showed that age-sensitive genes are more susceptible to oxidative damage and less amenable to repair than the genes that do not change with age. Some of the DNA damage could be repaired in culture, suggesting that not all aging-related changes are irreversible.

The link between normal aging, DNA damage, and neurodegenerative disease is of particular interest for Yankner, who has studied Alzheimer's disease for many years. While the role of DNA damage in cancer has long been appreciated, before now it was not widely thought to play a role in neurodegenerative diseases, Yankner said. His group is interested in figuring out why some gene sequences are more vulnerable to DNA damage than others and whether the changes of normal aging might trigger the molecular cascades that underlie degenerative diseases of aging like Alzheimer's and Parkinson's.

One promising avenue for future work is whether measures to protect the genome early in adult life will pay off by slowing brain aging. It is too early to tell whether gobbling vitamins or other antioxidants will protect the brain, for example, but Yankner looks forward to testing such ideas in aging animal models using the gene damage assay.

In the short term, the researchers look forward to completing their gene profiling of the aging brain using chips that cover the entire genome. Even then, Yankner says, the work has just begun. "I see the gene expression profile not as a definitive indicator of what has gone wrong, but as a first step in providing a hypothesis that will be pursued by many labs to understand the biology of the aging brain." ■

Pat McCaffrey is a former intern at Focus.

Invading pathogens are often chewed up into tiny bits by immune system scouts and spit out in the form of antigens that then trigger T cells to hunt down similar invaders. For years, the antigen-presenting scouts have been thought to dine exclusively on proteins, avoiding the bacteria's gelatinous carbohydrate coat. It now appears that antigen-presenting cells can consume a more eclectic diet than previously thought. Dennis Kasper, Brion Cobb, and their colleagues in the Channing Laboratory of Brigham and Women's Hospital have essentially caught the cells in the act of taking in and degrading a set of carbohydrates. The findings, reported in the May 28 issue of *Cell*, could open the door to new methods for raising the immune system to fight disease.

▶ GENE AGE WASTELAND

In a region of DNA long considered a genetic wasteland, HMS researchers have discovered a new class of gene. Most genes carry out their tasks by making a product—a protein or enzyme. But the new one, found in yeast, does not produce a protein. It performs its function—in this case to regulate a nearby gene—simply by being turned on. HMS researchers Joseph Mortens, Lisa Loprode, and Fred Winston found that by switching on the new gene, they could stop the neighboring structural gene from being expressed. "It is the active transcription of another gene that is regulating the process," says Mortens, lead author of the paper in the June 3 issue of *Nature*.

▶ GLOBAL WARNING

In the largest study of its kind ever undertaken, the World Health Organization's World Mental Health Survey Consortium, headed by Ronald Kessler, HMS professor of health care policy, has found that the proportion of mentally ill people who receive treatment is woefully inadequate. The survey, conducted in 14 countries around the globe, also revealed that as many as 85 percent of those with severe mental illness are not being treated at all, while many who are receiving treatment have no mental illness. The findings, published in the June 2 issue of the *Journal of the American Medical Association*, suggest that a reallocation of resources may help steer treatment to patients in need.

▶ OLD DRUG, NEW TRICK

An existing drug already approved by the Food and Drug Administration may protect newborns from brain injury and long-term neurologic problems caused by excitotoxicity, or over-activation of neurons, report researchers led by Frances Jensen, associate professor of neurology at Children's Hospital. Premature infants are especially vulnerable to excitotoxicity. The drug, topiramate, is currently approved to control seizures in adults and in children over age three but the findings may provide the basis for a protective therapy that could be given to babies immediately after traumatic birth events that compromise the brain's blood and oxygen supply. Such events can cause long-term neurologic abnormalities that underlie serious conditions like cerebral palsy and epilepsy. "Our results indicate," says Jensen, "that a clinical trial should be considered to determine topiramate's safety and efficacy in newborns."

CLASS DAY
2004


SEEDS OF CHANGE



PHOTOS: DAVID TURNER/CORBIS (RIGHT); AMI VITALE/GETTY IMAGES (FAR RIGHT)

WHAT WILL IT TAKE TO FEED
A HUNGRY WORLD? A NOBEL
PRIZE WINNER EXAMINES THE
PROMISE—AND POLITICS—OF
USING THE LATEST SCIENTIFIC
ADVANCES TO BRING RELIEF TO
AN OVERCROWDED PLANET.

[*by* NORMAN E. BORLAUG]



CONSTANT CRAVING:
Borlaug believes that
genetically modified
agriculture is critical to
solving the world's
hunger problem.

E

PIDEMICS WERE COMMON DURING MY childhood. One of my earliest recollections is of the panic caused by the 1918–19 influenza tragedy. I survived bouts with chicken pox, measles, mumps, and pertussis, and I was fortunate to escape diphtheria, tetanus, typhoid, smallpox, tuberculosis, and poliomyelitis. During my 90 years, I have been hospitalized only once, in 1934, at the University of Minnesota Hospital, where I was confined with a life-threatening streptococcal throat infection. Sulfa drugs and antibiotics were not yet available, so my only treatment consisted of gargling with warm saltwater

to alleviate the pain. My innate resistance allowed me a narrow escape; many others were not so lucky.

In my lifetime, I have witnessed great progress in health. These strides have been achieved thanks to the widespread use of better sanitation practices; the development of vaccines and drugs, including antibiotics; enhanced control of certain diseases; improved nutrition; and better housing and environments. The composite impact of these changes over the past century has been to increase American longevity, on average, by 30 years, while also improving the quality of life.

But we have no time or place for complacency on the biologic front. New strains of human, animal, and plant pathogens continue to emerge through mutation and hybridization. Ancient diseases such as malaria, schistosomiasis, and trypanosomiasis remain uncontrolled, and new diseases with disastrous consequences, such as HIV/AIDS, have emerged.

Today, the world confronts these pandemic diseases. Unless control is strengthened, the World Health Organization estimates that as many as 35 million people will die of tuberculosis over the next 20 years. Malaria alone is responsible for more than one million deaths a year, mostly in sub-Saharan Africa. And HIV/AIDS is taking a terrible toll. More than 20 million have died from AIDS and more than 40 million are currently infected with HIV, 70 percent of whom live in sub-Saharan Africa.

That is why the development and use of molecular genetics are so critical to our never-ending battle to pro-

tect human, animal, and plant health. And that is why the ongoing debate between environmental zealots and researchers in human and veterinary medicine and plant science must be won on the basis of scientific data rather than emotion and rhetoric.

Shifting Winds

Change is one of the few certainties of life. Consider human nutrition, physical exercise, and health. In earlier days, the rich were fat and the poor were thin, and decent people worried about feeding the hungry. Nowadays, the rich are thin and the poor are fat, and one of America's greatest public health concerns is obesity—the result of too much food and too little physical exercise.

I have spent 60 years trying to increase food production in low-income, food-deficit nations. Better nutrition resulting from an increased availability of calories, proteins, vitamins, and minerals, combined with improvements in medicine, has resulted in a century of declines in mortality, as well as increased rates of per capita income in industrialized nations. Yet in densely populated, hungry countries such as India, Pakistan, China, Bangladesh, and Indonesia, these improvements have occurred only in the past four decades.

In most industrialized countries, less than 3 percent of the population is now engaged directly in agricultural production and less than 20 percent lives in rural areas. As a result, most people in industrialized nations are ignorant about the complexities of producing and equitably distributing food for all who come into this world. They are equally ignorant about the management of our forest resources for multiple uses on a sustainable basis.

Urban ignorance in rich countries about agriculture, forestry, and fisheries—indeed, about biological sciences in general—has permitted anti-technology critics to argue that humankind is being poisoned by modern high-yield agriculture and should return to traditional organic methods. As a result, today many people try to stop the application of new knowledge in molecular biology—especially the new transgenic biotechnological tools that offer so much promise for the future—from being applied to enhance efficiency of our food system through the development of improved plant varieties and animal breeds.

IN EARLIER DAYS, THE RICH WERE FAT, THE POOR WERE THIN, AND DECENT PEOPLE WORRIED ABOUT FEEDING THE HUNGRY. NOW, THE RICH ARE THIN AND THE POOR ARE FAT.

Most of the opposition to agricultural biotechnology has come from people in affluent industrialized countries who believe they are protecting Mother Nature from the vicious designs of multinational corporations. Well-fed and comfortable, they seem to want an idyllic, utopian, and organic world free of agricultural chemical pesticides, including chemical fertilizers—in short, a world without risk. Theirs is a rich-world argument that hurts the poor.

Taming the Population Monster

In principle, the human population is no enemy of nature. Someday, the human population may be several times larger than at present, without serious ecological harm. But today, many developing countries have population growth rates that are too high for current social institutions and technological knowledge to support at adequate standards of living. Thus, short-term global population stabi-

lization, especially in densely populated nations, is desperately needed. Universal primary education—and, as soon as possible, secondary education—should be our near-term first step toward achieving population equilibrium in developing nations.


During my lifetime, the world population has increased nearly fourfold, from 1.6 billion to 6.3 billion people. Although growth rates are slowing, each year we continue to add more than 80 million people to the world population. Most of them, unfortunately, are in food-deficit nations.

Several decades ago, in Asia, the application of modern science and technology to food production came to be known as the Green Revolution. During the past 17 years, I have been working in Africa with former U.S. President Jimmy Carter and the Sasakawa family of Japan on an initiative called the Sasakawa Global 2000 agricultural program. Our aim is to bring a green revolution in food production to millions of small-scale farmers. Unfortunately,

IT'S NOT EASY BEING GREEN:
Borlaug helped launch the Green Revolution to enhance food production in hungry nations. Here, farmers work the sugar fields in Veracruz, Mexico.



TODAY, IN AFRICA, WIDESPREAD FOOD INSECURITY AND MALNUTRITION PERSIST AND HAVE EVEN WORSENERD IN SOME AREAS. AFRICA'S FOOD PRODUCTION REMAINS IN CRISIS.

A large photograph showing the silhouettes of several people against a bright, hazy sky. In the foreground, a person is bent over, possibly working in a field. To their right, another person stands holding a large, dark, rectangular object. In the background, a small child is visible, and further back, another figure stands near some sparse vegetation. The overall mood is somber and evocative.

**FOR WHOM
THE BELL TOLLS:**
Every day more
than 800 million
people worldwide
go to bed hungry.

progress has been painfully slow—and far less substantial than the inroads made in Asia 35 years ago.

Today, in Africa, widespread food insecurity and malnutrition persist and have even worsened in some areas. Africa's food production remains in crisis, even though our demonstrations on hundreds of thousands of plots on farmers' fields clearly show that the technology is available to double and triple yields of major food crops. While the tech-

nology is available and smallholder farmers are eager to adopt it, unless Africa's rural infrastructure and institutions are significantly improved—especially transport systems, energy, water, schools, and clinics—all other efforts to reduce poverty and hunger, improve health and education, and secure peace and prosperity will continue to falter.

Achieving sustainable agricultural production with equitable distribution of sufficient food for the 9 to 10 billion

people likely to be on Earth by the end of the twenty-first century will not be easy. Advances in agricultural research and production—and the efforts of the world's farmers, ranchers, fishermen, and aquaculturists—have kept world food production growing faster than the population. Even so, at least 800 million people go to bed hungry most nights, not because there isn't enough food to go around but because they are too poor to buy or produce it.

I often ask the critics of modern agricultural technology to consider what the world would have been like without the technological advances that have occurred in agriculture over the past 50 years. If we were to try to produce the two billion metric tons of cereal grains harvested today with the crop yield technology of 1950, we would need to cultivate a total of 4.5 billion acres of land instead of the 1.8 billion acres that are actually used. Obviously, such a surplus of land is no longer available, especially in populous Asia. Moreover, even if it were available, if we were to try to bring an additional 2.7 billion acres of land into cereal cultivation around the globe, it would result in greatly increased soil erosion, loss of forests and grasslands, and destruction of wildlife habitats with the resultant extinction of many more animal and plant species.

Over the past 40 years, we owe a debt of gratitude to the environmental movement in industrialized nations, which has led to legislation to improve air and water quality, preserve wildlife, control toxic waste disposal, protect soils, and reduce the loss of biodiversity. Safeguarding the land, water, and atmospheric resource base of our planet is clearly central to preserving our quality of life and the long-term survival of humankind. In looking to the future, however, our ecological impulses must be grounded in rationality. Logic—based on scientific data, not sentiment—will best serve the interests of nature and humankind.

The use of high-yield production technology—with its consequent savings in land—has done much to protect the environment. This benefit is rarely acknowledged by environmental action organizations and little understood by urban populations. Technology is not the enemy of the environment; poverty is.

Freedom and Justice for All

Massive inequities continue today, despite our technological power to ensure food security for all who come into this world. Currently, more than one billion people in the industrialized world enjoy a standard of living that was unimaginable—even in the fondest dreams—of their grandparents and great-grandparents. Unfortunately, nearly one billion people remain illiterate, malnourished, hungry, ill, poverty-stricken, and without hope. Another two to three billion live outside formal economic systems, in varying degrees of poverty and want. These environments of human misery and hopelessness are fertile beds for sowing and cultivating seeds of terrorism, which poses a serious threat to civilization and the future well-being of humankind everywhere.

I urge you not to close your eyes and hearts to the less fortunate, especially the hundreds of millions of people who begin and end each day hungry. These injustices must be lessened in the decades ahead. Remember, compassion is the greatest of all human virtues.

Scientists in medicine today confront an explosion of new technology, problems in the delivery of health care, and the prospects of bioterrorism. In your role as healers you will need to maintain a strong personal commitment to professionalism and lifelong learning, to the welfare of your patients, and to the collective effort to improve the health care system for the welfare of society.

I encourage you to apply yourselves to the fullest and to adhere to the highest levels of professionalism. Never be satisfied with the status quo or mediocrity; instead, reach for the stars. Although you can never touch one, if you stretch yourself, you will get a little stardust on your hands. With this as a catalyst, you will be surprised at what you can achieve for yourself, your family, your community, your nation, and indeed, the world. ■

Norman E. Borlaug, PhD, received the 1970 Nobel Peace Prize for his scientific and humanitarian efforts to end world hunger.



DREAM ON

A new HMS graduate offers lighthearted insights and heartfelt encouragements. *by* ANDREW DAUBER

M

Y FELLOW GRADUATES—OR SHOULD I SAY, my fellow doctors?—let me be the umpteenth person today to congratulate you, but perhaps the first to say “Mazel tov.” ■ Since I suspect I will never win an Oscar, please indulge me a moment of personal thanks. When I was in fourth grade, I complained to my parents that my teacher was too hard and I wanted to switch to an easier class. They looked at me and said, “Andrew, go do your homework.” Thank you, Mom and Dad, for your constant encouragement and support throughout these past 20 years of school. I would also like to thank my wife, Sara, for enduring many minutes

of seeing spots while I learned to use an ophthalmoscope, endless hours of medical talk, and numerous evenings when I fell asleep over dinner.

It is hard to recall what we were like before medical school. I remember during anatomy tutorial in first year asking, “What’s the difference between ‘ventral’ and ‘dorsal’ and ‘front’ and ‘back?’” My tutor answered, “The only difference is that the patient doesn’t know what ‘ventral’ and ‘dorsal’ mean.” Neither did I at the time, but now med-

ical lingo flows from my lips. I can spell “atelectasis” and “graphesthesia” in my sleep. I know a million eponyms such as von Braun-Fernwald’s sign. Never heard of it? Here’s a hint—it’s the same as Piskacek’s sign. Still no luck? Don’t worry; I found it on my PalmPilot while writing this speech. It means asymmetry of the uterus with a well-defined prominence of the cornu, due to implantation near one of the cornua. Amazingly, in four short years, we have been transformed from Average Joe to Joe Millionaire (in debt), MD.

The best part of my time at Harvard Medical School was getting to know my classmates. I don’t know about you, but I find the idea of starting internship in a few weeks terrifying. I am thankful that we are all taking this next step together—except, of course, for our MD-PhD friends, whom we will be happy to see back on the wards

just in time for us to be their attendings.

I am also glad that we are all going into different fields. I like to think of it as a free consult service. If I ever need help interpreting a CT scan or MRI, no matter what city I end up practicing in, one of you future—is it 50?—radiologists will be there to help me. As for my personal health, I know that my skin and eyes will be well taken care of, but God forbid I should ever need surgery—I may actually have to turn to a Hopkins graduate.

**“WHAT’S THE DIFFERENCE BETWEEN ‘VENTRAL’ AND ‘DORSAL’
“THE ONLY DIFFERENCE IS THAT THE PATIENT DOESN’T**

I want to pass along a few secrets I learned in medical school. (For all of you out there who are not physicians, please don't tell your doctors that I revealed these tricks of the trade.) When a patient questions how long any given symptom will last—such as “Doc, when will my back pain go away?” or “Doc, how long am I going to have this cough?”—the answer is always “two to four weeks,” unless you're in pediatrics, in which case the answer is “one to two weeks” because kids get better faster.

If a patient describes a complex of symptoms that, despite your encyclopedic knowledge of pathophysiology, you simply cannot explain, look wise, nod, and say, “We see this, we see this.” Alternatively, if the patient is academically minded, just push up your glasses and mumble something about a case report in the literature. Ah, the famed medical literature! It works every time.

Here's the serious part. During third year, one of our classmates said, “Andrew, you know what's great about HMS students? They ask important questions, the really big ones that matter.” I couldn't agree more. I am continually inspired not only by your penetrating questions but also by your desire to find the answers to those questions and to create solutions when none exist. Through my years at HMS, I have been touched by all of your passions and dreams; they have infused me with a drive always to try to accomplish more.



Dauber

Whether your dream is to open a world-class cancer center in Puerto Rico, to ensure universal access to health care, to figure out how the inner workings of the brain control our ability to develop language, or to eradicate measles, here is my message to you: Keep striving to reach those goals. Harvard will open many doors for us in the future, but it is up to us to walk through those doors. So, my fellow graduates, the Class of 2004, as the great Aero-smith once sang, “Dream on, dream on, dream until your dreams come true.” ■

Andrew Dauber '04 is a resident in pediatrics at Children's Hospital in Boston.

**AND 'FRONT' AND 'BACK'?" MY TUTOR ANSWERED,
KNOW WHAT 'VENTRAL' AND 'DORSAL' MEAN."**

VISION &

A young physician offers a gracious prescription for how to practice medicine. *by* MARKELLA ZANNI

TWO YEARS AGO, WHEN I STARTED MY CLINICAL rotations, I struggled to understand what the doctors around me were saying. I was, at the time, used to speaking in full sentences made up of honest-to-goodness English words. Abbreviations such as “S.O.B.”—for shortness of breath—still struck me as profane. With the aid of reference books, though, I, too, picked up medical-speak.

Acronyms and technical terms rolled, almost reflexively, off my tongue. The change in my manner crept up on me. Were it not for one striking patient encounter, I might not have noticed it at all. ■ I met Edna in July, toward the end of my medical sub-internship. She was in her late

eighties, frail and soft-spoken, with warm, inquisitive eyes. A series of fainting spells had brought her to the hospital.

After learning all I could about her problem, I presented her case to my team. I was goal oriented, intent on crafting and executing a thoughtful plan. “Did you ask about her end-of-life preferences?” one of the residents inquired. I swallowed hard. This was something I hadn’t done. Ever.

“Not yet,” I said. “Not yet, but I will.”

That afternoon, I stopped by Edna’s room and sat down on the edge of her bed. We chatted for a while. She reached out a wrinkled hand and rested it on mine. Taking this gesture as my cue, I cleared my throat. “Last night,” I said, “when we first met, I forgot to ask you something.” She cocked her head to one side and looked expectantly at me.

I then gave Edna what I considered to be a sensitive monologue about advance directives, but she didn’t seem to catch my drift. Finally, I decided to put the question more bluntly. “We certainly hope it won’t come to this,” I said, “but assuming your heart were to stop beating, would you want us to shock you?”

Edna bit her bottom lip. “Shock me? At my age? What could you possibly say?”

In my interactions with Edna, I had focused on what I needed to accomplish, without much reflection on the style with

which I would accomplish it.

As we prepare to graduate, it’s natural for us to look ahead to what we as individuals will next achieve. These kinds of considerations constitute our visions of ourselves and our places in the world. No one would deny the importance of vision. More easily overlooked is the manner in which we daily conduct ourselves, or our style. I would like to give some thought to vision and style, taking a moment to observe what happens when the two come together.

**I WAS, AT THE TIME, USED TO SPEAKING IN FULL SENTENCES
ABBREVIATIONS SUCH AS “S.O.B.”—FOR SHORTNESS OF**

STYLE



First, vision. Albert Schweitzer, the humanitarian physician and philosopher, developed the idea that our spirit, or inner flame, is often kindled at the most auspicious time by an encounter with another human being. What kinds of encounters inspire? Different kinds, depending on your experiences and the way in which you've processed them.

Consider your own track record. When in your graduate school career—in your life—did you get goose bumps? When did you think, I need to do something about this situation? Or, I need to collaborate with this person? When did you experience that feeling of urgency, or necessity, or maybe even destiny?

Once you've identified this kind of encounter, it's easy enough to let it guide you. To the question "where should I place myself?" you can answer: I should place myself in an environment where I feel inspired to contribute. This may be a private practice in Porter Square. A walk in clinic in Port-au-Prince. A policy think-tank in Baltimore. A research lab in Brussels. You're the only one who can say for sure. You're the only one who can define your personal vision.

In the process of realizing your personal vision, style comes into play. How will you interact with your patients? With what attitude will you conduct research in public policy or basic science? I would argue that the foundation of style is kindness. In the setting of clinical medicine, kindness means working to understand your patients' feelings, considering their questions, or even holding their hands if that's what you sense they need to sustain a sense of dignity and hope.

But there's more to style than kindness. There's that flair we may tend to reserve for our lives outside medicine. That ability to write poems, to compose folk and rock songs, to choreograph African dances, to eat fire, to shred phonebooks.

By letting flair seep back into our professional lives, we will accomplish a couple of goals. We will connect more meaningfully with our patients, who, after all, have interests outside their aches and pains and temperature curves. And at the same time, we will—through our stamp, our style—indirectly pay tribute to those who have influenced us along the way: family members, teachers, mentors, patients, and, of course, that remarkably talented and diverse group we call classmates and friends.

You may think it's a tall order to define your vision and realize it with style. But the beauty is that giving in this way will make you feel good because people will reciprocate. Patients and colleagues—those to whom you've extended yourself—will laugh at your silly jokes, send you postcards from Maui, or remember you in their prayers. They will help you appreciate the joys in this life.

In my years at Harvard Medical School, I've been trained to emphasize a few key points in every talk. If asked to boil my speech down to its essence, I would say this: Think big, be yourself, and find joy. Or, vision plus style equals fulfillment.

My patient, Edna, with her more than 80 years of life experience, might have been able to tell me as much. No real shock there. ■

Markella Zanni '04 is a resident in internal medicine at Brigham and Women's Hospital.

**MADE UP OF HONEST-TO-GOODNESS ENGLISH WORDS.
BREATH—STILL STRUCK ME AS PROFANE.**

PRIZES &



PHOTO: IZZA GREEN

April Wang Armstrong

Richard C. Cabot Prize for the best paper on medical education or medical history, for her contribution to the textbook *Principles of Pharmacology: The Pathophysiologic Basis of Drug Therapy*

Ehrin Johnson Armstrong,

magna cum laude
VEGF-NFATc1 Signaling in Heart Valve Endothelium Implications for Heart Valve Development and Maintenance

Supinda Bunyavanich

Rose Seegal Prize for the best paper on the relation of the medical profession to the community: (1) *The Impact of Climate Change on Child Health;*

(2) *U.S. Public Health Leaders Shift Toward a New Paradigm of Global Health*

Ronald Ching-Yun Chen,

cum laude
Developmental Therapeutic Strategies for UCN-01

Jeffrey Hyo Chung,

magna cum laude
Cloning of a Novel ROBO Molecule (zfROBO4) Essential for Neuronal and Vascular Development in Zebrafish

Sandeep Robert Datta

Leon Reznick Memorial Prize for excellence and accomplishment in research: (1) *Akt Phosphorylation of BAD Couples Survival Signals to the*

CLASS OATH

Dean

Today, you stand before family, friends, teachers, and colleagues, ready to become physicians and dentists. For two thousand five hundred years, since the time of Hippocrates, doctors have taken an oath to affirm a commitment to their profession. This oath has served as both a tribute to their teachers and as a contract with their community. In this spirit, the Class of 2004 has created an oath that draws upon elements of oaths both recent and ancient. I now invite you, as a class, to share in this tradition and to articulate the ideals and principles that will guide you in the years ahead.

Class

I solemnly pledge to consecrate my life to the service of humanity:

To my patients:

- I vow to care for those in need and strive to alleviate suffering.
- I will empower my patients to make sound decisions for their health and well-being.
- I will respect and allow considerations of religion, race, and social situation to inform and refine my duties as a doctor.
- I will remember that medicine is an ever-changing art and science in which sympathy, honesty, and understanding create the trust whereby the surgeon's knife and the chemist's drug have utility.
- I will remember that I do not treat a disease or a number, but a human being, whose illness will affect the world they touch.
- I will respect my patients' dignity and autonomy, both in their living and in their dying.
- I will honor and protect the confidences entrusted to me.

To my community:

- I will maintain the utmost respect for human life and will not use my medical knowledge contrary to the laws of humanity.
- I dedicate all my knowledge and strength to the health of humankind and the treatment and prevention of disease.
- I will serve as an educator to my community.
- I will address the social and environmental problems that impact the health of my patients.
- I will support efforts to extend health care to everyone.

To my colleagues:

- I will respect the hard-won scientific gains of those doctors in whose steps I walk and gladly share such knowledge with those who are to follow.
- I will uphold the example and wisdom of my mentors and build upon their teachings to advance our field.
- I will work in diligent and honest collaboration with my fellow practitioners and health care providers to uphold the highest standards of patient care.
- I will teach and advance the art and science of medicine with honesty, kindness, and dignity.

To myself:

- I will work to constantly perfect my medical knowledge and clinical skills and strive to advance the science and practice of medicine.
- I will recognize my limitations and will seek help when needed.
- I will acknowledge my mistakes so that I may learn from them.
- I will maintain my own health and well-being, and the well-being of those close to me, so that I may best uphold my responsibilities.
- I will always act to preserve the finest traditions of my calling so that I may long experience the joy of healing.
- I will ensure that, above all, the health of my patients is my first concern.

With the support of family and friends, peers and mentors, I pledge to fulfill this oath to the best of my ability and judgment, as I dedicate myself to the art and practice of medicine.

AWARDS

Cell-Intrinsic Death Machinery; (2) Survival Factor-Mediated BAD Phosphorylation Raises the Mitochondrial Threshold for Apoptosis; and other publications

James E. De La Torre

Society for Academic Emergency Medicine Excellence in Emergency Medicine Award to a senior medical student who has demonstrated excellence in the specialty of emergency medicine

Sumeet Garg, cum laude

Langerhans Cell Histiocytosis of the Spine in Children

Katharine Creskoff Garvey

The New England Pediatric Society Prize to the senior who, in the opinion of peers and faculty, best exemplifies these qualities and looks far in a pediatrician

Suzanne Gah, cum laude

Altering the Natural History of Cerebral Tuberculous Sclerosis: Frontiers in Prognosis and Management

Brian Barkley Graham, cum laude

A Retrospective Study of Pediatric Tracheal Surgery

Anna Greka, magna cum laude

Henry Asbury Christian Award for notable scholarship in studies or research: *TRPC5 Is a Regulator of Hippocampal Neurite Length and Growth Cone Morphology*

Jamal Cinque Harris, cum laude

A Qualitative Study of HIV Testing Beliefs, Attitudes, and Behaviors of Black and Latino Males Ages 15-23 in the Boston Metropolitan Area

Renee Yuen-Jan Hsia

Bemy Jelin '91 Prize to that senior who most demonstrates overall academic excellence with a career interest in pediatrics, oncology, international health, or psychiatry

Jerrilyn Denise Jones

The Community Service Award to the senior who has done the most to exemplify and/or promote the spirit and practice of community service

Ravi Shanker Kamath,

magna cum laude
Functional Genomic Analysis of RNA Interference in C. Elegans; James Tolbert Shipley Prize for excellence and accomplishment in research: (1) Systematic Functional Analysis of the Caenorhabditis Elegans Genome Using RNAi; (2) Functional Genomic Analysis of C. Elegans

Chromosome I by Systematic RNA Interference; and other publications

Vikram Sheel Kumar,

magna cum laude
The Design and Testing of a Personal Health System to Motivate Adherence to Intensive Diabetes Management

Aya Kuribayashi, Liyun Li, Alden Joseph McDonald III, Amina Ann Parter, and Coleen S. Sabatini

The Multiculturalism Award to the senior in each Academic Society who has done the most to exemplify and/or promote the spirit and practice of multiculturalism and diversity

Julie Haya Levison

The Leonard Taw Humanism in Medicine Award presented by The Arnold P. Gold Foundation to a graduating medical student who consistently demonstrates compassion and empathy in the delivery of care to patients

Liyun Li, cum laude

Identification of Molecular Controls over Differentiation of Neural Precursors into Cortical Projection Neurons (CPN)

Kenway Lauie, cum laude

Hippocampal Mnemonic Activity and the Interaction Between Rapid Eye Movement and Slow Wave Sleep; Dr. Sirgoy Sanger Award for excellence and accomplishment in research, clinical investigation, or scholarship in psychiatry: Temporally Structured Replay of Awake Hippocampal Ensemble Activity During Rapid Eye Movement Sleep

Stephanie Misono

Role of the Inwardly-Rectifying Potassium Channel Kir2.1 in Mammalian Craniofacial Development

Tami Tiamfaak Margan, cum laude

Differences in Reproductive Hormonal Dynamics Between African-American and Caucasian Women

Paul Linh Nguyen

The Gerald S. Foster Award in recognition of contributions to the student body by virtue of serving on a student-faculty committee including but not limited to the Committee on Admission

Yvonne Ou, magna cum laude

The Endothelial Cell Nucleus as a Mechanosensor

Sallie Robey Permar, magna cum laude

Pathogenesis of Measles Virus Infection in Simian Immunodeficiency Virus-Infected, Measles Virus-Vaccinated Rhesus Monkeys;



PASTEUR Award presented to a graduating medical student whose work best exemplifies clinical investigation that has resulted in a published paper or one accepted for publication: (1) *Increased Thymic Output During Acute Measles Virus Infection;* (2) *Prolonged Measles Virus Shedding in Human Immunodeficiency Virus-Infected Children, Detected by Reverse Transcriptase-Polymerase Chain Reaction*

Ngoc Thi Phan, cum laude

Examining the Antigenicity of Modified HIV-1 Envelope Glycoproteins

Eric Scott Rasenthal

Kurt Issebacher Prize to the senior demonstrating humanitarian values and dedication to science

Jaan Joonsun Ryoo, cum laude

Transcriptional Changes Induced by PS-341 Treatment of Ca-cultured Multiple Myeloma and Bone Marrow Stromal Cells

Lucy Q. Shen, cum laude

Exploring Rasglitazone-Mediated Angiogenesis Inhibition: From the Lab Bench to the Clinics

Derek Matthew Steinbacher,

cum laude
Mandibular Advancement by Distraction Osteogenesis for Tracheostomy-Dependent Children with Severe Micrognathia

Mary Elizabeth Layfield Tharndike

Robert H. Ebert Primary Care Achievement Award for excellence and outstanding accomplishments in the field of primary care medicine

David Tsai Ting, magna cum laude

Optimization of HoxB4 Expression in Embryonic Stem Cells in the Development of Hematopoietic Stem Cells

Ryan Bernard Turner

Henry Asbury Christian Award for notable scholarship in studies or research: (1) *Structural Elements That Govern the Substrate Specificity of the Clot-Dissolving Enzyme Plasmin;* (2) *Coevolutionary Patterns in Plasminogen Activation*

CAN HUMPTY DUMPTY BE PUT BACK TOGETHER?

A leader in medicine offers a proposal to help doctors, patients, and hospitals




PHOTOILLUSTRATIONS: STEPHEN WEBSTER

TWO CONCERNS COMMONLY VOICED ABOUT HEALTH CARE TODAY INVOLVE MEDICAL errors and costs. To analyze and prevent errors, we have taken a systems approach. Not so with health care costs. The sad fact is that efforts toward health care reform have accomplished little. Critics continue to publish reports on how bad things are, and the government repeats old approaches, hoping for consequences that will, somehow, differ this time around. ■ It seems to me—and to Jack Cook, a colleague knowledgeable about health care financing—that with costs, a systems approach is also called for. Granted, systems do exist in health care today—conventional Medicare is a system, as are strict staff model HMOs such as Kaiser Permanente—but each has its limitations. ■ Despite the good intentions of physicians and

navigate the health care crisis. *by* MITCHELL T. RABKIN





hospitals, neither fee-for-service nor managed care has held down costs effectively, largely, we believe, because of a lack of incentives guiding players in the system to make choices that are both cost-effective and therapeutic. Now, health care should not be a commodity delivered through the operation of market forces. Yet certain market incentives can be used to foster the effective and cost-efficient delivery of services. Payment systems, however, tend neither to offer doctors incentives to use resources prudently nor to encourage patients to be wiser purchasers.

The challenge is to keep costs at a reasonable level yet provide appropriate care and coverage. The goals include the prevention of illness, the promotion of health, the use of effective medical information technology and evidence-based medicine, and the moderation of costs. The absence of effective incentives not only fails to temper costs, but it can also undermine quality of care. Beta-blockers, for example, are widely underused as therapy after heart attacks.

Systems of health care delivery and payment today carry mixed messages. While fee-for-service offers practitioners no compelling incentives to control costs, the patient perceives an advantage in that doctors and patients can make decisions about clinical care without intrusion by insurers. This is the dominant Medicare model.

By contrast, the staff model HMO, exemplified by Kaiser Permanente, employs a budget in which fee-for-service inflationary incentives are neutralized through salary-based payment. But the strict HMO approach is not for everyone, restricting, as it does, physician choice and confining services within a closed network.

Here's the dilemma: Can we develop a system of good care that enjoys both the advantages of fee-for-service and the organizational and payment strengths of Kaiser?

For Humpty Dumpty to be put back together again, consider these principles: cost control is not possible without a budget; the budget must provide fair payment for the services covered; medical care decisions should be made by physicians and their patients based on the best scientific evidence available being applied to the care of individual patients; economic incentives must be meaningful for all involved to meet budget targets, quality-of-care standards, and patient satisfaction; and incentives should be comparable across the spectrum of payers.

The challenge is to move from principles to practice while allowing the doctor and the patient the freedom to

make clinical decisions together and retaining the patient's right to change doctors or hospitals if dissatisfied with performance. Could we develop incentives to influence the patient, the primary care physician, the referral specialist, the hospital, and the insurer?

All the King's Horses

We've labeled our idea "Balanced Incentives for Health." Here's how it would affect the stakeholders:

The patient. The patient would choose a primary care physician (PCP) who would be responsible for providing or arranging for the patient's covered services. As with other insurance plans, the patient—and employer, in many instances—would pay the insurer a monthly premium. The incentive to follow the PCP's recommendations is that, by doing so, the patient would pay no additional out-of-pocket deductibles or copayments for services delivered or authorized by the PCP. The patient could also self-refer to any physician at any time without prior authorization by the PCP or the insurer, but deductibles and copayments would then apply.

The primary care physician. Insurers would foster the voluntary formation of PCP groups—perhaps ten to twenty PCPs—who would be paid on a per-member-per-month basis, risk-adjusted, taking into account issues such as the age, gender, and health of enrollees. That baseline payment would be adjusted in relation to three indices: the group's financial performance, the results of patient satisfaction studies, and the evaluation of services in terms of accepted quality criteria.

A meaningful *additional* payment in relation to favorable overall performance according to these criteria would create a further incentive for the PCP. The satisfied patient would tend to stick with that doctor—and commend that doctor to others—while the unhappy patient would switch

WE CAN DEVELOP A RATIONAL SYSTEM THAT WE FUND FAIRLY, OR WE CAN CONTINUE OUR EXISTING NON-SYSTEM, WHICH RESTRICTS AND UNDERFUNDS CARE AND YET WILL BREAK THE BANK.

to another. This would give the patient a choice and the physician an opportunity to be rewarded for performance.

The referral specialist. The payment to the primary physician group would include money the PCP would pay for specialty consultations, emergency department visits, and all other covered services except inpatient hospital care. Specialty care would be monitored by the same information technology that watches the PCP's usage, budget, and criteria for quality. When the patient's PCP orders the referral, the patient would pay nothing out of pocket. Should the patient select another specialist, the deductible and copayment would apply. Paying referred specialists out of the total capitated payment, the PCP would lean toward those who are careful with costs but also practice with high quality and patient satisfaction. Specialists not doing so would be avoided.

The hospital. Payment for hospital care would come from a different component of the insurer's premium revenue, and the basis of hospital payment would be similar to that of Medicare Part A, where payment levels relate to diagnoses and complicating issues. While the PCP groups would not be at risk for the actual cost of any hospitalization, their capitation payments would include an additional incentive targeted toward a pre-established standard for hospital days or admissions related to the risk of their patient population. That would curb marginally indicated hospitalization, where the burden of cost is shifted to the hospital rather than remaining with the PCP.

And All the King's Men

But this scenario carries two big "ifs." First, the arrangement could work only if fairly priced and paid. Second, the key to reform would lie in Medicare's leading the charge. Given its dominance, an unresponsive Medicare would subvert any effort for reform in the private sector. Today's Medicare will remain part of the problem if it fails to lead in the solution. But, by using its enormous contracting power to implement this new paradigm, Medicare could create a balanced incentives option more attractive than its current offerings. And the private sector would likely follow.

To the doubters among you, consider these questions: Who is happy about health care today? And what new and workable ideas are forthcoming?

The public and employers are pressed to pay more and more, physicians and patients are unhappy with the way care is delivered, academicians are concerned about the impact on teaching and training, costs continue to mount, quality issues

persist, and the number of people uninsured remains a national scandal. The date by which Medicare will run out of money has recently been advanced by seven years, and the Medicare drug legislation is now estimated to rise 25 percent over what was said to be the definitive cost. How much closer to crisis must the nation slide before action is taken?

Balanced Incentives for Health calls for significant change. Patients would have a range of choices with graded financial responsibility. PCPs would gain a resumption of the professional responsibility of managing clinical care in return for a fair system of prepaid capitation with meaningful incentives. PCPs and specialists alike would compete by providing high-quality care, using resources prudently, and satisfying their patients. Employers would enjoy a tempering of costs with support of care quality and workers' health. And insurers would get relief from the inappropriate responsibilities of clinical management in return for more effective cost control.

Balanced Incentives for Health is a workable new paradigm for Medicare and one that could trigger comparable movement in the private sector. And for governments, this paradigm could lead toward universal coverage.

To achieve success, Balanced Incentives for Health would require both fair payment and meaningful incentives. Equally critical would be a sound information management system. As a nation we face this choice: we can develop a rational system—one that we fund fairly by using focused market incentives for prudent commitment of resources and one that delivers high quality care and satisfies the expectations of patients—or we can continue our existing non-system, which restricts and underfunds care and yet will break the bank.

The question is: Are physicians, the public, insurers, businesses, government, and the various health care interest groups sufficiently fed up with the status quo and sufficiently concerned about the future to move beyond declaring, "Something must be done!"? The essence of futility is to continue doing the same thing and expect different results. It is time to make health care in the United States the benefit it should be for all. ■

Mitchell T. Rabkin '55 is a professor of medicine at HMS, CEO emeritus at Beth Israel Hospital and Caregroup, and an institute scholar at the Carl J. Shapiro Institute for Education and Research at HMS and Beth Israel Deaconess Medical Center.



AMERICAN PIE

A physician argues that national health insurance will provide good care *and* a far more equitable distribution of resources.

by STEFFIE WOOLHANDLER



Woolhandler

I STARTED COLLEGE AS AN ECONOMICS major but quickly found the discipline too dry; we used to joke that an economist was someone who lacked the personality to become an accountant. So I made what I thought was a 180-degree turn and decided to become what I called “a people’s doctor.” I was going to take care of poor people and the oppressed, senior citizens and children. I was going to be out there delivering hands-on care. But I hadn’t been in medicine for long before I realized that financing gets in the way of delivering care. We may have great doctors, great hospitals, and great research but, over and over, health care financing impedes our work.

Sigmund Freud pioneered the idea that things aren’t always what they seem. As an internist, I would paraphrase Freud as follows: everything in human life is sex, except sex—which is aggression. But I would go a step further and say that in the public health and policy field, everything about human life is health, except for health care—which is finance. So I want to touch on health care financing—both how the system is broken in this country and how we as physicians can help fix that system to benefit our patients.

Today’s 44 million uninsured Americans represent only the tip of the iceberg; many people with only partial insurance still can’t get all the care they need. That’s one way to view the current health care crisis. The other way to look at it is in terms of the rising cost of health care. This year it’s expected to increase about 8 percent, after 9- and 10-percent jumps in previous years. And this means that the health care crisis will not disappear. We are in an unstable system, at least partly because of what these rising health care costs mean to employers.

I was recently a visiting professor at McMaster University in Ontario. To get there, you have to drive about 40 miles south from Toronto to the city of Hamilton. En route, you pass a field where, as far as the eye can see, there’s nothing but Ford Freestars. Up the hills, down the hills, in the valleys: Ford Freestars. It turns out that every Ford Freestar in North America is now manufactured in Ontario. We hear a great deal about the two million U.S. jobs lost to China, but we hear less about U.S. jobs migrating to places like Canada, where employee benefit costs related to health care are much lower. For employers in the United States, employee benefit costs represent 8 percent of payroll; but in Canada they’re only a fraction of that. So we have an untenable situation in this country with rising employee benefit costs interfering with the competitiveness of U.S. firms.



WE DISCOVERED THAT MEDICAL BILLS CONTRIBUTE TO 40 TO 55 PERCENT OF ALL BANKRUPTCIES IN THE UNITED STATES, DEVASTATING LITERALLY MILLIONS OF PEOPLE EVERY YEAR.

During the past few years, I've been doing research with colleagues at Harvard Law School, in which we interviewed people in five federal bankruptcy courts around the nation to find out whether there were medical contributors to their bankruptcies. And we discovered that medical bills contribute to 40 to 55 percent of all bankruptcies in the United States, devastating literally millions of people every year. The transcripts of our phone interviews with these people reveal dreadful stories. When they became sick or injured, they lost their jobs, their health insurance, their retirement savings, their kids' college funds, their homes—all because of our broken health care financing system.

The other side of this story is the underinsured, many of them senior citizens. By the year 2025, the average senior citizen will have to devote 35 percent of his or her income to health care, despite the existence of Medicare. Now that's only if we continue with the *current* Medicare program, which provides defined benefits, such as a certain number of hospital days.

If we were to enact the Republican Party proposal advocated by President Bush, we would replace employer- and government-promised benefits with vouchers, which recipients could supplement with their own money to purchase health insurance. If we adopt such a model, by 2025, the average senior citizen will be spending 43 percent of his or her income on health care, despite the existence of Medicare. These voucher-like payments are a key policy initiative right now in Washington and in the business community. They are, in short, a way to reduce the total amount of insurance available to patients.

Another side of this crisis is the profound bureaucratization of health care. We've witnessed a 2,500 percent increase in the number of health administrators over the past few decades. The business orientation in medicine is eroding patients' coverage. And it's taking away many of the elements that physicians find rewarding about medicine, including our ability to take good care of patients.

If we were to compare total health spending in the United States with that in other developed nations, we would find an interesting dichotomy. U.S. health spending can be split into two categories. The first is private spend-

ing, and the second is the tax-funded part of health spending—not just Medicare and Medicaid, but also the benefits of government workers. The second category also includes the so-called tax-subsidy to private health insurance, the amount of money lost to the Treasury because health benefits are not taxable as income.

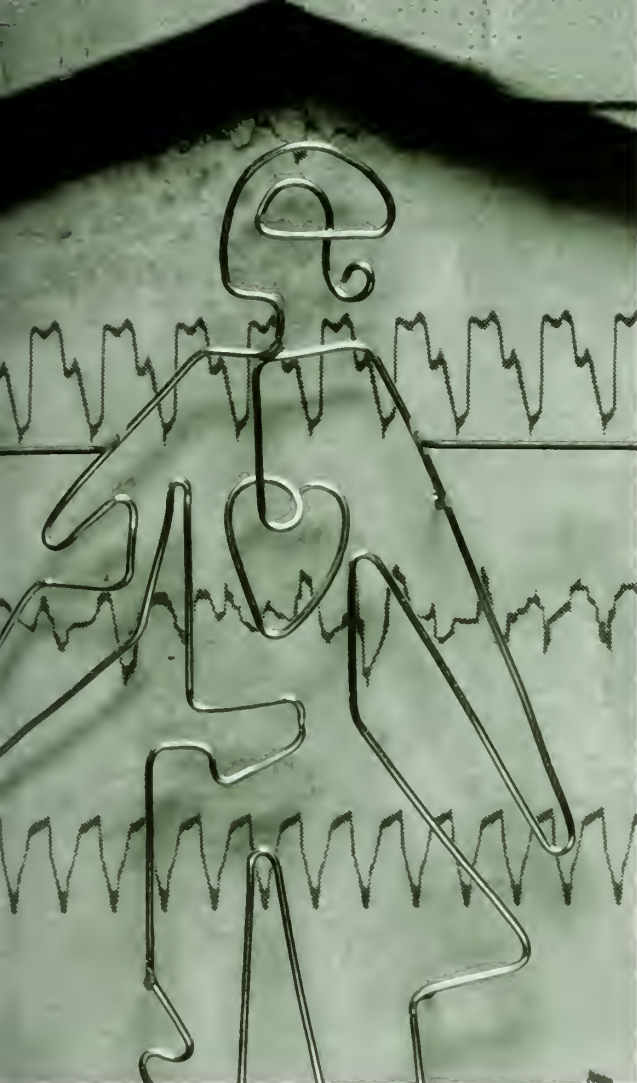
Sixty percent of U.S. health care is tax funded. And it turns out that the tax-supported share of health care in the United States already exceeds the total health expenditure in every other nation in the world—and yet the United States lags three years behind the best-developed nations in terms of life expectancy. And then we take an average of another \$1,400 out of our individual pockets for private expenditures. Clearly, the United States already has the money within the health care system to provide excellent health care for everyone.

A part of the wasted resources is administrative costs, which we quantified in a study published last summer in the *New England Journal of Medicine*. We found that the health administrative cost difference in the United States relative to Canada is more than \$1,000 per capita. To frame this issue in the context of hospitals, Boston's Brigham and Women's Hospital employs approximately 300 people in its billing department; Toronto General Hospital, a similar institution, has fewer than ten. That's because Toronto General Hospital receives its entire budget on a lump-sum basis, negotiated every year, with one-twelfth of the money deposited into its bank account every month. This provides huge administrative savings and allows the hospital and its doctors to focus on care.

In a recent *New England Journal of Medicine* article, the authors of one study divided the United States into health care spending quintiles. They found that some of the best health care in the country is the cheapest, on a par with rates in Canada. Minnesota and Washington State, for example, teach us that we can spend less and still have excellent quality.

Now, I'm from Louisiana, near Cameron Parish, a poor area that nonetheless has the highest quintile of Medicare spending. Yet there's no way you can convince me that high-spending Cameron Parish has better medical care than the low-spending areas of Minnesota and Canada. In response to a claim that Cameron Parish gets good value





for its health care dollar, we Louisianans would say, "That dog won't hunt."

In fact, the authors of this study found, through complex statistical analysis, that, in the United States, the less expensive areas have a better quality of care than the high-spending areas. And their findings are consistent with those of other research. Most studies are showing that Canadians receive a quality of care similar to that of insured Americans and, obviously, much better than the aggregate quality available to the insured and uninsured in this country.

But what about political support for universal coverage? An October 2003 poll asked the American public, "Would you prefer the current system of universal insurance, like Medicare, run by the government and financed by taxpayers?" Sixty-two percent of the respondents endorsed national health insurance defined in that way.

My own group, Physicians for a National Health Program, looked at physician opinion as well. We interviewed a random sample of Massachusetts physicians and published their responses in the *Archives of Internal Medicine*. When asked which type of structure would offer the best

health care to the greatest number of people for a fixed amount of money, 64 percent endorsed the idea of single-payer national health insurance.

But are physicians willing to go public with their endorsement of national health insurance? You bet they are. Published last summer in the *Journal of the American Medical Association* was a proposal for single-payer national health insurance that's universal and comprehensive. The proposal—which was endorsed by more than 13,000 U.S. physicians—called for simplified reimbursements, no copayments, and the elimination of investor ownership of HMOs and hospitals because such ownership raises costs and lowers quality, as established in a recent review in the *Canadian Medical Association Journal*.

We physicians are calling for a system we've dubbed "Canada deluxe," a system with the administrative efficiency of Canada's national health insurance—and with the approximately 40 percent higher spending level that we are used to in the United States. And this proposal is precisely what Physicians for a National Health Program is advocating: improved health planning, public account ability for quality and cost, and minimal bureaucracy.

Many people, when they saw the JAMA article, with thousands of doctors calling for an increased government role, were shocked. And in fact, one editorial writer commented, "Physicians for a National Health Program? That's a little like Furriers for Animal Rights." Nonetheless, many doctors are finding that the current financing arrangements are just not tenable and have joined with their patients in advocating for national health insurance.

Now, because I like animal jokes, I'll end with one to emphasize that we can't expect better results with this crisis simply by doing the same thing over and over again. The story goes like this: Three elk hunters had hired a pilot to airlift them to a remote lake in Canada. When he dropped them off, the pilot said, "Now remember, it's a small plane. We can only bring back one elk."

When the pilot returned a week later to pick them up, the guys were standing there with three elk. And they said, "Look, last year you told us the rule about only one elk. We offered to pay you double to take two elk on the plane, and you agreed. This year, we'll pay you triple to airlift out all three."

The pilot thought it over, nodded, loaded the elk and the passengers, and took off, only to run into the top of some trees almost immediately. Luckily all on board survived, but they were injured and dazed. When one of the hunters finally gained consciousness, he asked, "Gee, where are we?" And one of his buddies replied, "Well, I'm not sure, but I think about 50 feet from where we crashed last year."

I invite you to join with us in our quest for universal health coverage, so we won't just keep crashing year after year. ■

Steffie Woolhandler, MD, is associate professor of medicine at HMS and Cambridge Hospital and co-founder of Physicians for a National Health Program.



HARD LA

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HEN I WAS ASKED TO PRESENT MY PERSPECTIVE as a private practitioner on the health care crisis, I didn't initially jump at the chance, though I had much to say. I was in the midst of the discovery phase of my first malpractice suit. My malpractice premium for the previous year had doubled. Our practice's largest third-party payer had sent us a take-it-or-leave-it letter along with a drastically cut reimbursement schedule. My physical stamina and emotional commitment to obstetrics were in constant dispute about the wisdom of continuing to deliver babies. I was the embodiment of health care in crisis.

When I finally agreed to take this opportunity on Alumni Day, I was pleased to have an outlet for the rage I felt toward the impediments to continuing my private practice. But as my rage cooled, I began to consider how the health care crisis was affecting the health of my daily practice, the health of my patients, and my own health. Unfortunately, my consideration yielded more questions than answers to the dilemma of how to keep the health in health care.

How did I end up in this position anyway? How did I come to practice the specialty with one of the highest risks of malpractice actions and one of the highest liability insurance premiums? Why did I limit my practice to women, the less economically empowered half of the population? (The insurance companies' regard for women's health can be surmised by their tendency to reimburse many services that are peculiar to women at routinely lower rates than those for comparable services for men.) And whose idea of a joke was it when the decision was made that babies would not generally be born between nine in the morning and five in the afternoon?

The simple answer: it was Harvard's fault. Surely my decision to pursue obstetrics was not based on my medical school ob-gyn rotation, for it can be best described as one of singular experiences. I had seen exactly one patient with pre-eclampsia, one with a Caesarean section, and one with a twin delivery—and they were all the same patient. No, it was because someone at HMS had convinced me that I could enjoy all the aspects of internal medicine and surgery that I loved, that I could care for women throughout the seasons of their lives and add quality to those lives, and that I could practice preventive medicine—all through the ob-gyn specialty.

Now you see my real reason for accepting this invitation: to revisit the scene of the crime; to consult with some of the players who were there before, during, and after

my decision was made; and to decide whether my obstetrical practice is still a workable proposition in the current state of crisis in litigation, liability insurance, reimbursement, and physician burnout.

One need only visit the American College of Obstetricians and Gynecologists (ACOG) website to get an updated estimate of the proportion of ob-gyns who will have malpractice actions brought against them during their careers; the number now hovers near 80 percent. We are indeed a high-risk specialty. A recent ACOG survey concluded that concern over medical liability has the largest negative impact on career satisfaction for ob-gyns.

The solution for many of my colleagues has been to eliminate obstetrics from their practices. Some have retired early or moved to other professions altogether. And these same concerns have contributed to an all-time low in the number of U.S. medical students applying for ob-gyn residencies. These trends make the question of who will be delivering our babies a legitimate one indeed.

BOR

An obstetrician delivers a tough assessment
of the realities of a medical specialty in peril.
by VANESSA HAYGOOD



DOCTORS ARE NOW FACED WITH HAVING TO GATHER, ASSIMILATE, AND INTEGRATE MORE INFORMATION INTO A PLAN OF CARE, ALL IN EVER-DECREASING LENGTHS OF TIME.

Why the steady increase in malpractice claims? The reasons are myriad, but a recurring theme is unmet expectations, a disconnect between what patients feel their doctors should have done for them and what their doctors have actually done for them. So, are expectations too high, or is performance too low? I do know that the bar has been raised for what is considered acceptable in terms of an outcome for a baby, results from surgical procedures, and the ability of diagnostic tests to predict disease.

At the same time, for each patient we encounter, doctors are now faced with having to gather, assimilate, and integrate more information into a plan of care, all in ever-decreasing lengths of time. In my specialty, this translates into much more complex obstetrical interviews and advice sessions as we try to ensure awareness of any medication intake, environmental exposure, or chronic habit that may affect the pregnancy.

Next are the informed consent issues. Does each word of the informed consent conversation need to be documented to confirm that it was actually uttered? We recently spent nearly six months revising our in-office consent form for vaginal birth after Caesarean section—better known as VBAC, a true four-letter word in obstetrics—to ensure that all risks we had described to each patient are included, before defaulting to the “unforeseeable risks” clause. Again, are expectations too high, or is performance too low? The two do seem to be moving away from each other at breakneck speed, creating a chasm ripe for spawning malpractice actions.

Other malpractice actions relate to the need for a patient who has suffered an injury to be able to pay for the medical care required to live with that injury. The current litigation system, an inefficient conduit for these resources, is often the only recourse a patient has for adequate assistance. I suspect many patients would favor a system that rapidly brought funds to help them meet their medical needs and replace lost earnings. I believe, perhaps naively, that fewer patients would feel the need to punish their doctors for their pain and suffering if those needs were met.

Malpractice actions and malpractice premiums are directly related—or are they? It is true that awards to plaintiffs, especially in obstetrics, have skyrocketed. Some suspect, however, that the rapid rise in liability insurance premiums is just as tightly linked to poor stock market performance and the resultant inability of the insurance companies to meet their fiduciary responsibilities to their shareholders.

Whatever the cause, I've seen my insurance premiums take off like a wildfire in a drought. My dismay at having

those premiums double in one year was dwarfed by the dread I felt as I tried to change carriers to seek better rates. That meant buying tail insurance, also known as prior acts coverage, priced at twice the premium of the previous year.

How can such increases be funded? In private practice, our only source of revenue is seeing patients. So my only choices seemed to be decreasing the time spent with each patient or extending my current ten-hour office day. But when we added to our practice an adept certified physician assistant, an experienced nurse practitioner, and five certified nurse-midwives, the numbers seemed workable again.

That light at the end of the tunnel dimmed, though, when our managed-care contracts arrived, accompanied by new fee schedules. Those schedules have yet to increase even as much as staffing or supply expenses, and certainly never as much as malpractice insurance. Again, what could we do? See more patients? Drop the plan in question? Try to negotiate a fairer reimbursement schedule? A recent successful lawsuit against a large managed-care organization in North Carolina to end unfair physician reimbursement practices has brought at least one carrier back to the negotiation table.

Medicine can be physically, intellectually, and emotionally challenging. Add a few more hours to the day and medicine becomes physically, intellectually, and emotionally demanding. Yet a few more hours transforms medicine into a tyrannical drain on all our sensibilities. Taking time to refuel is the only way I know to keep the challenges of medicine alluring.

The refueling process takes a different form for each of us. I have been fortunate to find refueling stations in many places. They lie among my wise patients, my grateful patients, and sometimes even my sad, frightened, or angry patients, and the stories they share with me. My refueling depends on the moments I take to discover that the office and hospital staff are mothers, daughters, and dreamers just like me.

And yes, in the wee hours of the morning when the nine-month journey has come to an end and a tiny being with all new possibilities makes an appearance, I find it hard to imagine that I won't keep doing this work. It's impossible to sum up how deeply I feel about what I do each day, or how the challenges we all face now affect that commitment. But I have realized that I am not yet ready to give up hope that health care can be made healthy. ■

Vanessa Haygood '78 practices obstetrics with Piedmont Healthcare for Women in Greensboro, North Carolina.

A DOCTOR'S GAMBLE IN NEVADA

One state's struggle to survive the medical malpractice crisis has left doctors, patients, and lawmakers searching for answers.

by KATHERINE A. KEELEY



NEVADA—KNOWN FOR ITS ROULETTE wheels, craps tables, and one-armed bandits—has recently acquired notoriety for another series of high-stakes wagers: some of the nation's most expensive malpractice premiums and the largest number of personal

injury attorneys per capita. In 2002, Nevada drew national attention when, as a result of its malpractice insurance crisis, its only level one trauma center closed for ten days.

Unfortunately, the problem that started in Vegas did not stay in Vegas; 19 other states have joined Nevada in its classification by the American Medical Association as "in crisis."

The crisis started when jury awards in Clark County, where Las Vegas resides, began to increase. In the mid-nineties, such awards remained stable in the \$500,000 range for cumulative payout for all malpractice cases. But in 1998 they began to rise steadily until they peaked at

\$21 million in 2001. In Nevada, a state with roughly 3,700 active physicians—more than 2,400 of whom are in Clark County—there simply aren't enough insurance policies written to overcome payouts on that scale.

And since insurance companies set their premiums on a regional or state basis, and they perceived Nevada juries to be operating with a jackpot mentality, Nevada became a bad place to do business. When St. Paul, the leading insurer in Nevada, announced it was pulling out in 2002, the company insured 60 percent of all physicians in the state, including most of those in high-risk specialties. After the pullout, many doctors faced premium increases of

100 to 400 percent.

For some, the rise in premiums meant they could not make ends meet and had to retire early or leave the state. Our malpractice problem had just become a crisis, one that took on a political angle when Nevada's commissioner of insurance called a hearing. Large numbers of us in the medical community closed our offices. We wore our white coats to the hearing to make a political statement and show our unity.

WE LEFT OUR PRACTICES TO BATTLE THE TRIAL LAWYERS' LOBBY. BUT WE WERE CLEARLY NEOPHYTES IN THE POLITICAL ARENA, WHILE THE LAWYERS WERE PLAYING ON THEIR HOME TURF.

Our presence at the hearing generated some media attention, and the governor subsequently created a state-run insurance company to provide medical malpractice insurance to doctors as a short-term solution. But we did not want the new insurance company to write high-priced policies. We wanted Nevada's own version of a Medical Injury Compensation Reform Act (MICRA), which proved to be a miracle cure for California's malpractice woes in the 1970s.

Among other provisions, MICRA dictated a \$250,000 hard cap on non-economic damages per incident and limited attorneys' fees. Doctors in high-risk specialties believed that MICRA would bring them affordable premiums. And those of us not in high-risk specialties did not want to work in a hostile environment, where the smallest perceived mistake could lead to a damaging lawsuit that could jeopardize our careers. We did not want to view our patients as potential adversaries. We wanted to focus on the practice of medicine and the delivery of quality care.

We had heard that the only way MICRA passed in California was through an organized strike by the majority of its physicians. They did not return to work until effective reform was brought about by their state legislature. We knew a bold political statement was needed in Nevada.

Traumatic Events

In the spring of 2002, orthopedic surgeons at the University Medical Center (UMC) Trauma Center in Las Vegas evaluated their risk and resigned, one by one, over a three-month period, citing excessive liability exposure. The lack of specialty coverage forced the center to close on July 3, 2002. The closure presented a particularly acute problem because the center normally serves a city of 1.5 million and the next nearest trauma center is 80 minutes away by helicopter. This action brought the insurance issue to the political forefront and compelled Nevada's governor to call a special session of the legislature to address the crisis.

I take regular call at the UMC Trauma Center to handle facial trauma cases. I also take call at many of the outside private hospitals where trauma patients were brought following the closure of the center. Those hospitals had no emergency in-house anesthesia coverage, and private practice general surgeons found themselves in charge of trauma patients. In some cases they had not taken care of such patients since their residencies, decades earlier. A number of people who were transported to area emergency rooms died shortly after arrival or had to be life-flighted to the closest trauma centers in neighboring Arizona or California. We will never know if

those patients could have been saved or would have had better outcomes if our trauma center had remained open.

With the special session scheduled, the governor assured the orthopedic surgeons that meaningful reform would be enacted, and they agreed to return to work. The trauma center re-opened ten days after it had closed. I joined a small number of doctors to attend the special legislative session in our state capital, Carson City, 400 miles north of Las Vegas. We left our practices to battle the trial lawyers' lobby. But we were clearly neophytes in the political arena, while the lawyers were playing on their home turf. We were not as effective in bargaining and, in the end, agreed to possibly ineffective legislation.

Too Little, Too Late

The new legislation, dubbed Assembly Bill 1 (AB1), created a \$350,000 cap on non-economic damages from each defendant to each plaintiff, with two exceptions: gross malpractice and "special circumstances." Now, when have you ever heard a lawyer describing malpractice as mild? Of course, attorneys will characterize every case as one of gross malpractice and special circumstances.

We also agreed to dissolve the Medical Dental Screening Panel (MDSP), which had been created in 1986 as a response to our last malpractice crisis. This panel had been responsible for screening all malpractice cases before they could move to trial. The panel had not prevented any cases from going forward, even if there had been no determination of malpractice, though it had made the process more difficult and costly for both sides. The process had also served as discovery for the plaintiff's side because the whole case needed to be laid out before the panel prior to trial.

I believe that if the orthopedic surgeons had waited until a true MICRA passed before returning to work, they could have brought about substantive reforms. But understandably, the pressures on them were too great, and they could not live with the thought of patients dying because of their walk-out.

In the end we did not get all we wanted, but it was a start. Like any type of tort reform, AB1 must go through the courts to test whether it can stand up to judicial review and constitutional challenge. Unfortunately, the \$350,000 cap will apply only to occurrences after October 2002, further delaying the potential benefits.

The situation has not improved much since the passage of AB1. Insurance companies are still asking the insurance commissioner for double-digit premium increases. Seven



Insurance Policy for the Future

If we want to continue with our current private health care system, we need to make medical malpractice cases less lucrative for attorneys. As long as attorneys think they can navigate the court system easily and often emerge with a settlement—and possibly a jackpot award—they will continue to pursue these cases. Tort reform with caps on non-economic damages will make these cases less appealing. Limitations on attorneys' fees will also make these cases less lucrative and will be helpful to patients.

In line with tort reform, we also need jury reform to allow physicians to have a better shot at a well-informed jury. The proposed federal tort reform now before the U.S. Senate would move medical malpractice cases to the federal court system. In Nevada, these cases are currently heard in district court, where the jury pool is based on the list of drivers licensed with the Department of Motor Vehicles.

The jury pool for federal courts, by contrast, is drawn from registered voters, usually a more educated group. In addition, federal judges are appointed and therefore have a chance to act independently, instead of appeasing those who contribute the most to their re-elections. One positive move in this direction is that judges who sit for malpractice cases in Nevada are now required to have completed additional education, and almost all exemptions from jury duty were removed by the last legislative session.

Of course, the solution to the crisis would not be complete if we did not look to ourselves for improvements. As physicians, we always need to seek ways to decrease medical errors and to use evidence-based medicine in our decisions. We also need to protect peer review and to keep the results confidential to allow us to learn from our mistakes. We need to continue to educate doctors and medical students on the importance of both obtaining informed consent and warning patients about possible complications so they are not so surprised when things do not go as planned.

I chair the Quality Care Committee at Nevada's largest hospital, which happens to be private. These are the kinds of changes we are always trying to make to protect both doctors and patients. We need to continue to work on communication with our patients when things do go wrong. Studies have shown that a simple apology is sometimes all a patient needs to hear.

And finally, especially in relatively sparsely populated states like Nevada, we need to continue to scrutinize any requests for insurance rate changes and to find incentives for insurance companies to offer malpractice coverage.

With some of these changes, perhaps we can convince the doctors who work in Nevada to stay in Nevada. ■

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other insurers have abandoned Nevada. Only five medical malpractice insurance companies remain in Clark County, and only two of those are writing policies for surgeons and doctors in other high risk specialties. Physicians continue to restrict their practices as a form of risk management, and some are choosing to retire early or to leave the state altogether because of high premiums.

Another disturbing trend in Nevada—especially Clark County—is the decreasing number of active physicians per 100,000 residents. Of the 50 states, we currently rank 47 on that measurement. With the decrease in new physicians and Nevada's continued population growth, we are on track to be number 50 soon.

The biggest surprise after the passage of ABI was the sharp rise in the number of malpractice case filings per month. This increase occurred immediately after ABI took effect and is thought to have resulted from the abolishment of the screening panel. The average number of case filings per month tripled in 2003. This year we are averaging approximately 74 per month, a rate still significantly above what it had been before passage of ABI, but one that appears to be leveling out.

Obviously the legislation itself did nothing to discourage attorneys from filing cases. In a reaction to this, KODIN, or Keep Our Doctors in Nevada, was organized to call for stricter MICRA-style legislation and to take the issue directly to the people in the form of a referendum on our November 2004 ballot. If it passes, the initiative it describes will both remove the two exceptions that were created when ABI passed and impose a limit on attorneys' fees. Unfortunately, a poll conducted in Las Vegas in March showed that, at that time, only 34 percent would vote yes, 41 percent would vote no, and 25 percent were undecided.



BUILDING BRIDGES

During the past year, Harvard Medical School has witnessed both changes and collaborative accomplishments. *by* JOSEPH B. MARTIN



THE LONGWOOD MEDICAL AREA HAS undergone extraordinary change in the past five years. We currently configure ourselves around the South Quad, which is now a hundred years in its development, and the North Quad, which includes Vanderbilt

Hall, the Harvard Institutes of Medicine, and the New Research Building (NRB). ■ The NRB, which is connected to the Harvard Institutes of Medicine, features about 430,000 square feet for state-of-the-art research and is designed to encourage collaboration through co-location. Now that we have relocated from the Quad to the new building two of our basic science departments—the Departments of Pathology and Genetics—we can allow for

new staff and juxtapose the members of both departments with scientists working at Beth Israel Deaconess Medical Center, Brigham and Women's Hospital, and the Dana-Farber Cancer Institute. The new building centers primarily around themes of cancer research, genetics, vascular biology, and neuroscience.

The freeing up of space on the South Quad by this relocation has allowed us to focus on where science is headed in this century. Working with our department chairs, we have formulated five areas of emphasis, many of which are interdisciplinary and interdepartmental.

The first area of emphasis is the new Department of Systems Biology. In creating this department, we had recognized the existing strengths of systems neuroscience and wanted to build further on them. Chemical biology, including chemical genetics, uses modern chemistry to dissect gene functions and to look at interruptions of genes. We received a grant of approximately \$50 million from the National Institutes of Health to support research led by Dennis Kasper, former dean for academic programs at HMS

and now director of the Channing Laboratory. With that grant we have formed a major, collaborative research effort in emerging infections and vaccines in areas relevant to national biosecurity concerns. And finally, by establishing a new Center for Molecular and Cellular Dynamics, we have enhanced the area of structural biology.

The Department of Systems Biology is the first of its kind in the nation and the first new department that we've formed at HMS since Philip Leder '60 joined the School to lead the genetics department in 1980. We anticipate more than 20 faculty recruitments, and it is my hope that Walter Cannon, Class of 1900, would be pleased to know that we have restored physiology to a department structure—the modern physiology of the twenty-first century.

Second, we created the Broad Institute. This remarkable feat was accomplished by MIT President Charles Vest and Harvard President Lawrence Summers working with

the Broad family of Los Angeles, who approached us because of a family interest in inflammatory bowel disease and their connection to physicians at Massachusetts General Hospital. Interested in the potential of finding genetic solutions to ulcerative colitis, they met with Eric Lander, who has been responsible for perhaps 25 percent of the human genome decoding process. When they tried to recruit Lander to Los Angeles, he expressed his preference to stay in Boston, so they came to us with a donation of \$100 million pledged over ten years, with additional private funds to be raised, to establish the institute in Boston. Lander, as the first director of the Broad Institute, now has a joint appointment as professor of systems biology at HMS as well as a professorship at MIT and membership in the Whitehead Institute.

The third area of emphasis was the creation of the Harvard Stem Cell Institute this past spring in response to the scientific need to explore the therapeutic implications of stem cell research—and to do so sooner rather than later, in light of the federal policy on stem cell research that limits access to a few cell lines. Douglas Melton, a well-known

THE NEAR-TERM TARGETS OF POTENTIAL STEM CELL USE INCLUDE BLOOD DISEASES, CARDIOVASCULAR DISEASE, DIABETES, AND NEURODEGENERATIVE DISEASES.

researcher at the Harvard Faculty of Arts and Sciences and a Howard Hughes Medical Institute investigator, has joined with David Scadden, a professor of medicine at Massachusetts General Hospital, and approximately 50 other faculty from our major hospitals, the Medical School, MIT, and the Faculty of Arts and Sciences to form the Harvard Stem Cell Institute. Melton, the father of two children with juvenile diabetes, has been instrumental on the national scene in calling into question the federal restrictions on stem cell research.

Stem cell research uses multi- or totipotent cells, which, unfortunately, gives rise to ethical concerns. Dealing with these issues is part of our plan; the questions surrounding whether it is legitimate to take frozen embryos that would otherwise be discarded and use them for therapeutic purpose are central to the concerns our country now faces.

Using the blastocytes, a collection of perhaps 60 or 70 cells, a scientist can, by removing the inner cell mass, obtain stem cells that can be kept in culture in perpetuity and become a line that then allows the scientist to collect, at various stages, multiples of that original stem cell family. The stem cell is unique in that it is capable of self-renewal, which means that a single stem cell can give rise to a daughter stem cell, which can then give rise to a further stem cell. This process is a normal part of human physical development, but it is also called into action by physiologic stimuli prompting tissue regeneration.

The plan for the Harvard Stem Cell Institute is framed, in part, around the following considerations: that the proportion of the population over age 65 will double by mid-century; that the most costly care is provided not to the acutely ill but to those with chronic organ failure; that disability drives up health costs and drives down productivity; and that tens of millions of people now suffer from such illnesses as Parkinson's disease, diabetes, and Alzheimer's disease.

The goal of the institute, which will be seeking private funding to carry out its activities, is to transform the basic science of understanding stem cell proliferation and to modify those cells in order to place them into the appropriate environments for treatment.

The near-term targets of potential stem cell use are: blood diseases, in which stem cells are critical to the treatment of cancer, aplastic anemia, and bone marrow disorders; cardiovascular disease, in which the promise is already evident in clinical trials using stem cells inserted into atherosclerotic areas of an artery; diabetes, in which stem cells clearly can be seen as the energy, insulin-producing moiety that offers hope



PHOTO: STEVE G. LIBERT

of taking patients off insulin, perhaps within my lifetime; and neurodegenerative diseases such as Parkinson's disease.

Our fourth area of emphasis is an expansion of life sciences in the Allston-Brighton area, where Harvard has acquired substantial amounts of real estate over the past decade. This property—adjacent to Harvard Business School and Harvard's athletic facilities—will be the site, totaling more than 200 acres, of significant development over the coming years, with the first construction scheduled to begin around 2006. The plans for this initiative have been the result, over the past year, of vigorous activity involving many faculty, staff, and students across the entire university. Those of us in science have been gratified by President Summers's clear assertion that life sciences should be a substantial component of the activities that take place at that venue.

And, fifth, our central mission: a transformation of medical education, almost exactly 20 years after the New Pathway planning was begun under former Dean Daniel Tosteson '48. In transforming medical education, we face several great challenges, the first of which centers on the content of the curriculum. What should we teach? What is the core material? What should every student know—or know how to research?

Another challenge is the contemporary crisis in medical education costs, specifically the issue of student debt. How can we give our students both the education they need and a future that isn't compromised by student debt?



RETURNING TO THE ROOST: Alumni reported enjoying the dean's update on the Schaal, as well as the other speakers' perspectives on the nation's health care financing crisis.

The third challenge lies in the areas of promoting professional development and teaching our students compassionate and culturally competent care.

A fourth challenge is the compensation of clinical teachers. Probably no single issue has our faculty more exercised and worried, and yet more eager to work on solutions than the question of how to compensate them for their teaching.

Finally, all of these issues are further complicated by the cultural clinical chaos of our academic health centers: the short-term stay, the acuity of the patients who come in, the rapidity with which they are discharged, and the inability to find an hour when a student, a faculty member, and a patient can talk and learn from each other.

These are some of the major issues we've been tackling recently. And as we think about the future, a number of priorities emerge:

Establishing new objectives and standards for our graduates. How do we define the quality of the medical education we are delivering? How do we measure it? How do we prepare our graduates to become everything they want and should be in the medical profession?

Offering new initiatives in clinical research to our first-year students when they arrive. Clinical research will increasingly be the academic and clinical trajectory of our students.

Training physician-scientists. Harvard currently trains more physician scientists than any other school in the country. We now have a national crisis in the scarcity of the supply of physician-scientists, though, and we need to train them even more efficiently and effectively to participate in a broad range of opportunities that stem all the way from evidence-based medicine, health care reform, and medical error prevention and extend to fundamental genetics, biochemistry, systems biology, and molecular biology.

Harmonizing basic scientists' and clinical scientists' teaching and scholarship. We now have approximately 800 medical stu-

dents and 600 doctoral students—and they barely cross paths. We need to bring them together in clinics and courses to learn from each other so that the clinicians know more about science and the scientists know more about clinical medicine.

Making the medical school curriculum seamless from the first through the final year. Most U.S. medical schools teach a two-by-two curriculum: two years of science, two years of clinical work. We've put a little clinical work into the first year and a bit more into the second year. We've tried to

put a little science into the fourth year and are still considering further improvements.

Creating a continuum of medical education. It is critical to link the MD program with the residency program and with the continuing medical education postgraduate experience. This is the toughest issue in medical education today—how to develop that entire continuum from which our practicing faculty can benefit.

Placing an emphasis on longitudinal experience. We want our students not just to see patients at the bedside before the procedure, but also to have a chance to follow patients and their families throughout the entire experience of illness and wellness, to talk about prevention and epidemiology.

Teaching teachers. We have formed the Academy at Harvard Medical School, which now has a membership of 212 teachers who are eager to help improve teaching throughout the Medical School environment.

Establishing new guidelines for rewarding our teaching faculty through promotion and devising fair and appropriate faculty compensation. In this context, compensation is not only money—it's also reputation, promotion, and recognition in the profession as a teacher. We are excited about the Academy, whose members range from students to senior professors. More than 50 innovative projects have already been funded, including the Academy Fellowships in Medical Education, named after notable past and present faculty members Curtis Prout '41, Herbert Morgan '42, and the late Hans Zinsser '42. These fellowships allow our junior faculty to take time to think deeply about how to pursue excellence in teaching.

I conclude with words by Ralph Waldo Emerson: "Do not go where the path may lead. Go instead where there is no path and leave a trail." ■

Joseph B. Martin, MD, PhD, is the dean of Harvard Medical School.





1944

SIXTIETH

1944 ■ Harold F. Rheinlander

A good time was had by all who attended our reunion. More than half of the original members of the Class of 1944 have survived these 60 years since graduation. There was general agreement among those present that we have withstood the ravages of time remarkably well.

The class dinner, held in the Faculty Room of Gordon Hall, formerly known as Building A, was attended by 47 and the luncheon at the Harvard Club by 42 plus 5 of our dental school classmates. Anecdotes, fueled by vivid memories of some of our more noteworthy experiences at HMS, passed around the room at both events.

Class members expressed considerable interest in organizing another reunion in two years even though HMS does not officially sponsor reunions beyond the 60th. Should we elect to have another class meeting during Alumni Week, the alumni office staff have assured me they will help with arrangements. I will contact class members later in the year to assess the level of interest and to elicit suggestions about activities that might appeal to the group. ■

REPORTS

1949

FIFTY-FIFTH

1949 ■ Francis J. Riley

Ten of us, our wives, and one lovely widow attended the Thursday evening reception and dinner at Countway Library with pleasure and a certain solemnity. That morning and afternoon, some of us were fortunate enough to hear the Class of 1979's symposium, which was fascinating and encouraging. Others attended the HMS faculty symposium, which was also impressive.

Friday was Alumni Day on the Quad-rangle, with the business meeting and presentations of reunion gifts. Dan Federman '53 beautifully moderated "Navigating the Health Care Crisis." He even diplomatically managed a loquacious audience-participant with a Mark Twain rejoinder: "You may be right." Dean Joseph Martin gave one of his usual forward-looking presentations. Lunch on the Quad and our reunion class photo of just six classmates and their wives followed. Finally,

thirteen happily adjourned to the Stage Neck Inn in York Harbor, Maine, for the weekend.

We were the first post-World War II class, entering in 1945 and graduating 142 MDs, including the famous first 12 women, and 10 DMDs in 1949. Fifty-five years later, 87 MDs are still standing (61 percent) and 4 DMDs (40 percent), at 80-plus years. Time obviously has taken its toll, both in lives and states of health. There is every medical reason to expect, however, that when the Class of 1974 celebrates its 53th reunion in 25 years, they can anticipate prevailing to age 90 and beyond.

I should mention that as the little-known tax collector for the class reunion, I eventually replaced the uncommonly nice chairman, Morgan Vigneron, who was ailing seriously. Significantly, the reunion committee held only a single meeting, in the fall, which might have affected attendance. ■





1954

FIFTIETH

1954 ■ Thomas O'Brien

A record breaking 68 members of the Class of 1954 plus spouses and a few children attended one, and most attended all, of our reunion events. A reception and dinner were held on Thursday evening in the domed hall of the School's huge, glass New Research Building, fittingly adjacent to our nostalgia-drenched Vanderbilt Hall.

After the program and lunch in tents on the HMS lawn on Friday, a charter bus took classmates to the Chatham Bars Inn on Cape Cod and returned us to Logan Airport and other sites on Sunday. Clear, sunny days and vast beaches, dunes, gardens, and verandas encouraged walking and schmoozing. Microphones at the Thursday and Friday dinners and the Saturday clambake prompted almost everyone to talk to the assembled about what they remembered, liked, disliked, did then, have done since, and still want to do.

At the core of the reunion were the casual, meandering conversations on

the bus, at meals, in ocean-viewing wicker chairs, or on walks. Many reflected on why they so enjoyed talking with classmates they had not known well in medical school. We were all shaped by the times we grew up in, now foreign to all those younger people. We were surprised to have been admitted to HMS, frequently overwhelmed by the strange, often hilarious activities of medical school and later training, and grateful to our accomplished, colorful, and supportive HMS faculty.

Our careers have been complex, varied, and buffeted by chance and entangling health care systems. But they are better understood by one another of us than by others. And we now share increasingly the stages-of-life stuff; we are still puzzled by our children and are fawning over our grandchildren. We enjoy much that is in our memories and more that can be drawn from the collective memory of the Class of 1954, so much so that many wish to gather again before another five years pass. ■

1959

FORTY-FIFTH

1959 ■ Bucknam McPeck

Forty-one members of HMS and HSDM attended our reunion; including guests, 74 celebrated the great event. We started Wednesday evening with a cocktail buffet at the MIT Faculty Club. The room offered a view over the Charles River basin and a splendid vista of Beacon Hill and Back Bay. Classmates and families renewed old acquaintance and brought each other up to date. Once again we demonstrated that '59ers really enjoy each other's company.

The following evening we gathered at the Union Club of Boston for the class banquet. At the end of dinner, classmate Bob Blacklow spoke about HMS then and now, and what the future might bring. From School archives he unearthed our class statistics and compared them with those of current students. The good news is that we as a group would still do well in today's admissions competition.

Friday afternoon the Class of '59 fled north to the Black Point Inn, just south of Portland, Maine. This storied New England resort was our headquarters for

the next 48 hours. The food, drink, and recreation were super, but the myriad opportunities for both lively and quiet conversation were the best feature. The class held two informal meetings. Saturday morning's loosely centered on retirement. After some general discussion, classmates focused on opportunities for improving the lot of our fellow man. It almost seemed as if those who had retired and those who were considering it were so imbued with the Puritan work ethic that they couldn't bear the guilt of not doing good deeds. This lively conversation lasted for more than two hours.

On Sunday morning, we talked over projects that we might undertake to benefit medical care generally. We then discussed plans for our 50th reunion and strategies for enticing more of our classmates to celebrate, both by coming and by contributing to the reunion book. We are getting older, and after the 50th, the number of active classmates will begin to decrease. We'll have later reunions, but the 50th will probably be the last great opportunity to get us all together. ■





1964
FORTIETH

1964 ■ Robert McCarley

Our reunion, blessed by June perfect New England weather and the presence of some 90 class members and guests, began Thursday evening with a reception at the South End home of Dave Chapin. While catching up on each other's lives we enjoyed this classic renovated Boston row house, circulating and conversing up and down its three levels. At the class picture the next day, we were surprised and pleased to see Professor George Erikson—who had tricked us in a 1960 anatomy quiz by asking where the Circle of Tugo was—also taking a picture of us!

Friday night was dinner at the Harvard Faculty Club, where we enjoyed the Theatre Room as a backdrop to the latest events in our lives and, appropriately, to a screen show of our photos and the 1999 reunion. Jean Hurd, wife of Class Treasurer Joe Hurd, was accorded a standing ovation for her good work as the HMS alumni coordinator. On Saturday we journeyed to the home and bucolic farm of Joe Dorsey, where we communed with each other and with the goats and sheep and enjoyed an old-fashioned clambake.

There may be something magical about having reached the age of 65, for the atmosphere was one of warmth and openness, even more than at the 35th, so much so that Steve Jackson talked about the after-

glow that would follow the reunion. Some of us are still in love in with our careers and some regard our relationship with medicine as a dying one, but we all felt open to talk about our lives, our class, our joint initiation into the mysteries of medicine and HMS, and our shared life's journey.

Since we have done pretty much what we could be expected to do in terms of careers, we are now thinking about the expression of other facets of our lives. The new interests include the visual arts, music, travel, and adventure. Retirement begins to be more on our minds. About a third of us are already there, and still more are cutting back on time at work in favor of these other interests.

All sweetness and light and no notes of discord or dissatisfaction? The managed and independent care pathway wars seemed to have receded into the distance, in marked contrast to our 25th. But, as we reach the time when the fate of our estates is more acutely brought to mind, the controversy over whether the Harvard endowment fund managers are demonic, greed mad beings intent on becoming masters of the universe, or simply professionals doing a super job of enhancing Harvard's wealth to all our benefit and getting rewarded commensurately, seemed to resonate.

We had renewed contact and updates, with pleasant surprise over good fortune—and deep sympathy for tragedy, most often in the form of personal illness of class members or their family members, events that appeared to be genetic roulette—unfair, unearned, unmerited—and events to which we are all now increasingly vulnerable.

The large number of our offspring who are now entering medicine suggests that our core idealism and love of the profession has been transmitted. The new generation might not be as uncomfortable as we in a different environment, and, indeed, might prefer it.

We thought of and missed those not there and wished still more could have come. But we were grateful for being in touch through Marv Corlette and Kay Aldrich's compilation of the reunion book. Joe Hurd has since posted many reunion photos on www.ofoto.com; email him at joseph.k.hurd@lahey.org for more details.

Let's keep in touch, and see you at the 45th! ■

1969

THIRTY-FIFTH

1969 ■ George E. Thibault

Twenty-two members of the Class of 1969 and 16 spouses attended all or part of the reunion activities. Mike and Gretchen Harrison traveled the farthest (from San Francisco). Thirteen of the 22 arrived from out of town, including Curt Freed, who arrived after most of us left the clambake on Saturday. He gets an A for effort.

Thursday evening we enjoyed a reception at the School's New Research Building on Avenue Louis Pasteur, and we were impressed with this latest addition to the campus. Friday night we had dinner at the newly renovated Downtown

Harvard Club, where we marveled at the extraordinary views of Boston.

On Saturday the Kannners hosted a delicious clambake on their exquisitely landscaped property in Lincoln. It was a mellow time, with much talk about family and health rather than work and retirement. We took both comfort and joy in rekindling relationships and sharing our personal lives. We were reminded how privileged we were to spend those special years with such a great group of people. Our only regret was that we did not see more classmates, but we know there will be a larger turnout for our 40th. ■





1974

THIRTIETH

1974 ■ Carolyn Compton

Well, they had to kick us out of County Library on Friday night. I think we could have gone on "reun ing" for quite some time after they cleared away the dessert dishes.

We were about 60 people at Friday's dinner, a small but respectable number given that the event overlapped with the Harvard/Radcliffe reunion of the Class of 1969 in Cambridge. We ate and talked, drank and talked, and hugged and talked—and were still talking on the way down in the elevator and out onto the street. We are nothing if not a loquacious group, but it was much more than just conversation. It was connection and reconnection. We were all different from our former student selves and yet still the same.

For many, children are now finishing high school or college or starting graduate school. Others of us have started over in

our private lives, our professional lives, or both. Whether we have changed or greatly modified our original careers (Gloria Singleton-Gaston is starting a second career as a singer, between patients!), have already retired, or continue to toil in the fields of academic medicine, we expressed gratitude for the opportunity to serve. We also felt the generation gap with today's medical students and residents who see their lives in medicine within limits.

We agreed that Margaret Ross deserved the prize for the longest essay in the reunion book and that Tim Russell was still our tallest classmate. We also universally missed Dave Calkins at the reunion and send our love.

The clambake was relaxed and fun. Saturday was sunny and breezy (paper plates flying everywhere), and we ate, drank, and talked, talked, talked. We had a glorious time even though it was hard to talk with lobster bibs flapping over our faces. Dave Koh is a saint to open his house to us for this event every time we have a reunion!

As has become a time-honored class tradition, we spent the late afternoon jamming with the Kohs' Porch Rock Band, now more appropriately named the New Aging Rock Band or the Boomers Against Geezerhood Rock Band. Just remember, kids, Mick Jagger will always be older than we are! Dave even had a songbook of lyrics prepared for the event—not that any of us could understand a single word of "La Bamba" (what does "*arriba y arriba*" mean anyway?). We were frankly terrible but had a great time being just that. I can imagine the caustic feedback that Dave must still be getting from his neighbors. Despite that, I am sure he is proud that the Class of 1974 still rocks.

Mitch Max and I want to thank the members of the Reunion Committee and all our classmates who came and made this reunion so lovely. Thirty years is a long time, and I still have trouble getting my head around the realization that so much time has passed. The upside of passing time is the increasing value of shared memories and aspirations and old friends. We celebrate that. ■



1979

TWENTY-FIFTH

1979 ■ Anne St. Goar

It was hard for us to believe that 25 years had passed, but once the shock receded we had a fabulous reunion. People repeatedly mentioned how relaxed we all seemed and what fun it was to connect with old friends and to make new ones.

For Thursday's class symposium we decided not to hold talks on updates of various diseases that we could hear at medical conferences. Instead we asked people to share life experiences and their often unique paths in medicine. Dan Rome and Deborah Prothrow-Stith did a superb job organizing a diverse and stimulating group of classmates.

Samplings from the symposium included Richard Rockefeller's description of being a patient with chronic myelogenous leukemia and the power of the Internet; Ken Robinson's politicking and preaching as Tennessee's commissioner of health; Deborah Prothrow-Stith's discussion of the overlap—or lack thereof—of medicine and public health and her introduction of Nancy Oriol—now associate dean for student affairs at HMS—because of her fabulous community outreach work with

the Family Van; Bill Bayer's inner city family and community medicine; Barry Tortella's performing surgery internationally in needy areas; Jill Stein's combining of medicine and politics by running for governor of Massachusetts on the Green Party ticket; and Marlene Krauss's (unsurprising) merging of business and medicine by financing medical start-up companies. These talks generated discussions that continued into the evening's dinner.

On Friday we joined the Alumni Association meeting and luncheon and then split off for dinner at Pine Manor College, ably organized by Susan Haas and Dea Angiolillo. The highlight of the dinner was a spellbinding performance of belly dancing by Marguerite Barnett—complete with real swords. (We're still wondering how she got those past airport security.)

We were blessed with a perfect day for Saturday's informal outdoor lunch at Mary Briggs's lovely home in Lincoln. We left wishing we did not have to wait five years until the next reunion but also knowing that those years will pass quickly. ■

1984

TWENTIETH

1984 ■ Lisa Iezzoni

Twenty-five members of the Class of 1984, as well as spouses, partners, and many children, gathered for a picnic under a perfect blue sky and towering trees at the Wellesley home of Sally McNagy, her husband, Bob Green, and their three children. Sally's house sits upon a small hill, and from my vantage I could see most people arriving. They looked tentatively upward as they climbed, seeming unsure what to expect. But anxieties vanished as people warmly greeted each other. The afternoon was lovely and passed too quickly, as have the past 20 years.

Two topics dominated talk: careers and personal lives. Yes, we all now speak with experience and some authority; we are definitely mid-career. Our careers are diverse. Some spend most of their time in practice. Others have left practice entirely, hold significant administrative positions, lead training programs, conduct research full-time, travel the globe for science, or manage concatenated careers—linking practice, research, administration, and teaching, in varied combinations. Some classmates face transitions, relocations, or major shifts

in occupations. Nonetheless, everyone seems up to the challenges they confront at work—even if, as in some instances, their careers are not exactly what they had anticipated.

On the family front, of course, some people are married with children, and some are not. Many with progeny brought their offspring, who ranged in age from toddlerhood to later teens. What struck me most forcibly was the amazing power of genetics—some children are spitting images of their parents. And since certain children are nearing ages at which we first knew their parents, these visions are spooky indeed! The next generation, though, seems as energetic, creative, and focused as their parents—a reassuring thought.

Rick Mitchell, who with his wife, Diane, was among the first to arrive at the reunion, will have the final words: "I'm still excited about what I do, even more impressed with what my classmates have accomplished, and very glad I chose medicine for a career. It was terrific to see so many of the group. Now I'm really excited about the 25th reunion in 2009, where we'll get almost everybody back!" ■



PHOTO COURTESY OF LISA IZZONI

1989

FIFTEENTH



1989 ■ Dominic Zambuto

The Class of 1989's 15th reunion marked yet another milestone for us and a time to reflect on how we have changed in the past five years. Although attendance was low (perhaps an indication of how busy we have become), those who came

enjoyed renewing old friendships and catching up with classmates we had not seen in years. Friday night we had a reception in the New Research Building at HMS. This facility is on Avenue Louis Pasteur and surrounds the former Boston English High School, now a research building. The HMS campus has grown so much since we were there.

Saturday was the perfect day for a picnic at Bob and Kathy Giugliano's in Westwood, where the children outnumbered the adults. All who attended had a great time. I cannot thank Bob and Kathy enough for being such great hosts. Sandra and Matthew Meyerson have already volunteered to host the 20th reunion picnic at their home in Concord.

Five years will pass quickly. Please plan to attend the next reunion. ■

1994

TENTH

1994 ■ Marc S. Sabatine

Our reunion proved a wonderful opportunity to see old friends. On Friday night, we gathered on the terrace at Davio's, greeting each other as we sipped wine and gazed at the Charles River on a beautiful summer night. We had an enthusiastic showing from all corners of the country. Thankfully, most of us have finished our extended training and are settling into life as attendings. Liz Speliotes, however, wins the award for most persistent student. Having earned her MD and PhD and completed her internal medicine residency at Massachusetts General Hospital, Liz is just now about to launch into a gastro-intestinal fellowship!

We capped the evening off by watching clips from a recently uncovered video that Ben Medoff shot backstage during our Second Year Show. We got to see Aaron Caughey '95 and Heidi Behforouz giving acting tips, Tim Friel posing as Judah Folkman '57, Lauren Solanko Koniaris applying makeup to cover the

rash she got from the makeup the night before, Amber Barnato wearing an arm cast, and Macrene Alexiades-Armenakas wearing a bullet bra. And, of course, we heard the incomparable Lauren Orloff Glickman singing "Everybody Walk Now!" and "It's in His Piss."

The next day we met up at Larz Anderson Park. More than two dozen alarmingly energetic kids frolicked as we enjoyed delicious barbecue catered by the one and only Redbones. Terry Shanahan Czeisler, Tim Friel and Kristin Sinnock Friel, Karen Loeb Lifford, and Andy Pienkny, already proud parents at our last reunion, brought their veteran kids back for round two. Jessica Cohen Dudley, expecting during our fifth reunion, is now a mother of three, and many other classmates have happily joined the ranks of parenthood.

It was an awesome weekend, and it was great to see everyone moving forward professionally and personally. Here's to us all gathering for our 15th reunion! ■

1999
FIFTH**1999 ■ Jean Ou Ung**

It's hard to believe that five years have already passed since we last walked the halls of the Medical Education Center as a class and said farewell to HMS. As we returned for this first of many reunions, some as senior residents, some as fellows, some as new attendings, and some as medical consultants, we remembered what an integral part of our lives those four or five (or six, seven, or eight) years at HMS were in our development as physicians and as human beings.

On June 11, a small and cozy group of us met at the Elephant Walk restaurant on Beacon Street for dinner and drinks. We reminisced over the good times at HMS and divulged new stories (and gossip) about other members of the Class of 1999. Everyone apparently enjoyed reading the reunion book. Mar

riages, babies, new homes, new jobs, and promotions—they were all exciting to read about in the book.

The next afternoon, after chasing down the Redbones delivery truck from across the highway, almost 30 of us (spouses, children, and all) gathered for a barbecue lunch beside the Charles River. Yummy food, great weather, and even better company made the afternoon one to remember.

While our class as a whole has expanded with the many new family members, both spouses and children, we have also transformed since medical school from students into doctors and teachers of medical students. The reunion was a time to catch up on the professional and personal growth of all our classmates and friends. I hope we will see many more of our classmates at the tenth reunion, if not sooner! ■



Elective Medicine

WHEN MASSACHUSETTS VOTERS HEAD TO THE POLLS THIS FALL, they'll have a chance to cast their ballots for a fresh addition to the usual slate of Democrats and Republicans vying for state representative: Jill Stein '79, running on the ticket of the Green-Rainbow Party. It will not be Stein's first bid for

elected office. When Green Party activists began searching for an articulate, passionate candidate to get their message out in the 2002 Massachusetts gubernatorial race, they tapped Stein even though, in terms of political experience, she was far greener than party organizers might have preferred. "I wasn't a member of any political party, and I had never run for anything in my life—other than secretary of my high school student council," she cheerfully concedes.

Although the choice of Stein, an internist and long-time public health activist, caught many outside the Green Party by surprise, Stein views her gubernatorial candidacy as the natural evolution of the same convictions that had drawn her to medicine. For Stein, the personal has always been political, going back to her childhood in an affluent, all-white suburb of Chicago.

"I grew up keenly aware of the importance of socioeconomic status," says Stein, who viewed the civil rights movement partly through the lens of her family's African American housekeeper's perspective on the unfolding drama. She made an idealistic commitment to hands-on action as an undergraduate at Harvard, where her interest in social change led her to a combined major in psychology, sociology, and anthropology.

But her overriding passion in that period of her life was music. A guitarist and singer, Stein spent the year after her college graduation as a troubador playing street music as part of Boston's "Summerthing" public arts program. It would not be the last time that the purity of her vision bumped up against practical experience. "I quickly learned," she says,

"how tough it is to survive as an artist without commercializing your music and to remain true to your values."

Stein brought with her to HMS the strong interest she had always nurtured in public health. When, as a medical student, she heard guest lecturer H. Jack Geiger discuss the community health center he had founded in the Mississippi



PERFECT HARMONY: Before medicine and politics, music was the realm in which Stein fused passion and idealism.

Delta, she was riveted by his description of a place that functioned as a catalyst for social change as well as personal health. Although that lecture crystallized in her mind the nexus between medicine, education, and community empowerment, Stein nonetheless found herself swept up in mastering what she describes as "the nuts and bolts of medicine."

Stein plunged into a general internal medicine practice. But once her second child was born, she cut back on her career. It was this period of parenting rather than doctoring that intensified her commitment to issues of environmental health. She became intrigued by an emerging medical literature linking behavioral disabilities in children and early-life exposure to environmental toxins. Her watershed moment came during a sustainability conference during which she heard a speaker claim that human breast milk can be vulnerable to contaminants. When the speaker could not answer her request for specific evidence, she decided to uncover the information herself.

The data she found troubled her both professionally and personally. "As a doctor, I wondered why I hadn't heard anything about these issues," she says. "And as a mother who had nursed her children believing I was improving their health, I began to worry that I had unwittingly exposed them to serious risks."

Eventually Stein was reassured that the benefits of breastfeeding far outweigh any risks. Of much greater concern, she found, was the effect of pollutants on the fetus, whose brain is at the most vulnerable stage of development. "Adverse impacts," she says, "on brain development and behavior—such as impaired attention, learning, and memory—have been demonstrated at levels of general population exposure to a variety of toxic pollutants."

Stein's new awareness led her to become involved with Physicians for Social Responsibility. She helped prepare a curriculum for physicians and nurses designed to train them to educate parents on avoiding exposure to toxic threats found in consumer products, food, and the environment. "That's important," she says, "because poisons such as mercury, lead, pesticides, dioxins, and PCBs aren't going away any time soon. And that's why we need solutions at the policy level,

so we don't put out more persistent toxins and make the problem worse."

This initial immersion in public health and policy issues was, Stein says, "a kind of boot camp" for her later entrance into politics. Her efforts led to, among other breakthroughs, regulations to clean up incinerator emissions, upgrades in federal and state fish advisories to protect women of reproductive age and children from mercury exposure, and the adoption of new standards to clean up Massachusetts coal plants.

Yet the road to public health victory proved shocking to the political novice Stein was at that time. "I went to town boards and the legislature armed with rational, scientific evidence and grassroots support for win-win solutions—proposals that improve health and the environment, save money, and create jobs," she says. "Yet I was dismayed to discover that none of it mattered." Stein was stunned when, as she describes it, "a hired gun for the incinerator industry was given free reign to talk while I—testifying as a concerned mother and physician—was allowed about 30 seconds." But she adds, "I never grew disillusioned; I just became more determined."

By the time she entered the political fray in 2002, Stein had already spent years advocating with nonprofit advocacy groups such as Clean Water Action and Physicians for Social Responsibility. Even so, she says, "running for statewide office seemed intimidating. But finally the Greens persuaded me that I could just keep doing what I was already doing, advocating for health and environmental causes. But by calling it a campaign, they pointed out, I could bring these issues to a broader audience. That was irresistible."

Stein's campaign ended with the election of Republican Mitt Romney as Massachusetts governor, but not before she had made a powerful impression with her articulate performance in the one televised debate in which she was allowed equal time. "I was ignored as usual by the other



"The other candidates droned on with their all-too-familiar sound bites, while I tried to propose real solutions, in the tradition of good medical problem-solving."

candidates. They droned on with their all-too-familiar sound bites, while I tried to answer questions and propose real solutions, in the tradition of good medical problem-solving. When I emerged from the studio at the end of the debate, I was surrounded by people telling me I had won the debate, as indicated by the instant viewer poll being conducted online."

In that moment Stein's understanding of politics was turned on its head. "I suddenly realized the obstacle to political progress is not the problem of persuading the public to support higher principles of justice, sustainability, and democracy," she says. "The public already shares those principles. The obstacle is not finding a better sound bite, or a more compelling message. The public already gets it. The hurdle is getting the word out to the public that there *are* real solutions to the problems they're already worried about—from the crises in health care and housing to global warming, economic and racial disparities, and our fraying social fabric."

Getting the word out is no simple task, Stein acknowledges, but it is one she believes to be solvable, especially at the local level. "That's the beauty of a race for state representative," she says. "Such a race is for a small enough district that a candidate can actually talk directly to the voters without being at the mercy of big corporate media or powerful campaign donors."

In Stein's view, community values and a commitment to a better future are alive and well among the general public. "I have no doubt that people will make the right decisions if they have the benefit of a real debate—not just for an hour in an election season, but as a way of life. That's what democracy and a responsible press are all about. If we put that process in place, we can begin to move in the right direction—toward a healthy, just, peaceful world. That's what people long for, and it is within our reach." ■

Beverly Ballaro is associate editor of the Harvard Medical Alumni Bulletin.

1942 William S. Jordan, Jr. received the Albert B. Sabin Gold Medal in May for his research in the field of vaccinology. Jordan is past director of the Division of Microbiology and Infectious Diseases at the National Institute for Allergy and Infectious Diseases, where he now remains active on a voluntary basis. He has devoted his professional life to promoting research on infectious diseases and vaccine development.

'43A Bruce Harris "My dear wife, Jody, passed away on July 6 after a long struggle with emphysema. We had celebrated our 60th wedding anniversary with much joy in February of this year."

1946 John W. Braasch "Due to editorial misadventure, the class note published under my name in the Spring 2004 issue of the *Bulletin* was neither clear nor complete. The name of the patient on whom three operations for biliary stricture were performed was Anthony Eden (Lord Avon), the youngest foreign secretary in Great Britain's history. In the period preceding World War II, Eden enjoyed a steady political ascent until, in 1939, he abruptly resigned his post as foreign secretary in protest of Chamberlain's policy of appeasing Hitler. Eden's potentially brilliant career was inadvertently sabotaged by complications from surgical error during a cholecystectomy he underwent in 1953 in London. When Winston Churchill suffered a stroke that year, Eden would have been his immediate likely successor, but he was still

recovering from the first of three repair operations. Eden was appointed prime minister two years later and had to confront Nasser's nationalization of the Suez Canal, a major crisis for Britain. Eden's failed response to these events may have been partly affected by his continuing poor health. Eden was initially referred to Richard B. Cattell '25 of the Lahey Clinic. Cattell performed the first and second of the repairs. I operated on Eden the third time and found a shrunken right lobe of the liver, which contained an abscess. This was drained and stented. My account of Lord Avon's biliary tract saga appeared in the November 2003 issue of the *Annals of Surgery*."

1947 Hermes C. Grillo "In April I attended a symposium in honor of classmate Morton Swartz, HMS professor of medicine since 1973 and chief of the Infectious Disease

Unit at Massachusetts General Hospital from its inception in 1956 until 1990, and since chief of the Jackson Firm there. Mort was honored with a day-long event, which was liberally adorned with talks by his former students as well as by HMS Dean Joseph Martin. Classmate Holly Smith was the principal speaker at the dinner that followed at the Harvard Club. Others present included Pat Blum, Robert Hopkins, John Littlefield, Marvin Slesinger, and John Stoeckle. In grateful appreciation of Mort's outstanding contributions to clinical medicine, research, and teaching, funds are being raised to endow a professorship in his name at the HMS Academy."

1952 Henry Grunebaum "I'm still working and still enjoying it."

John Shillito, Jr. "Bunny and I are doing fine in North Carolina. This fall we



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